THE ORCHID ALBUM.

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THE

ORCHID ALBUM,

COMPRISING

COLOURED FIGURES AND DESCRIPTIONS

OF

NEW, RARE, AND BEAUTIFUL

ORCHIDACEOUS PLANTS.

CONDUCTED BY

ROBERT WARNER, F.L.S., F.R.H.S.,
AUTHOR OF SELECT ORCHIDACEOUS PLANTS,

AND

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AUTHOR OF THE ORCHID-GROWERS' MANUAL, ETC.

THE BOTANICAL DESCRIPTIONS BY THOMAS MOORE, F.L.S., F.R.H.S.,
CURATOR OF THE CHELSEA BOTANIC GARDENS.

THE COLOURED FIGURES BY JOHN NUGENT FITCH, F.L.S.

VOLUME II.

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DEDICATED

BY SPECIAL PERMISSION

TO

H.R.H. The Princess of Wales,

BY

HER ROYAL HIGHNESS'

Very obedient and humble Servants,

ROBERT WARNER,
BENJAMIN S. WILLIAMS.

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J.Nugent Fitch del.et lith.

LÆLIA AUTUMNALIS ATRO-RUBENS.

J.Nugent Fitch imp.

LÆLIA AUTUMNALIS ATRORUBENS.

[Plate 49.]

Native of Mexico.

Epiphytal. *Pseudobulbs* oblong-ovate, terete, furrowed, bearing two or three leaves at the attenuated apex, and sheathed at the base with large brown imbricated scales. *Leaves* oblong-linear, spreading, smooth, leathery in texture. *Scape* terete, issuing from between the leaves, and much longer than them, bearing five or six flowers at the apex, jointed, with sheathing scales at the joints. *Flowers* large and richly-coloured, much more so than in the typical form, sweet-scented; *sepals* lanceolate acuminate, spreading, of a brilliant purple-crimson, paler towards the base; *petals* ovate acuminate, subundulate, of the same colour as the sepals; *lip* three-lobed, the lateral lobes erect, truncately rounded, white, the middle lobe obovate-oblong, of an intensely brilliant purple-crimson colour, bilamellate on the disk, the apex recurved. *Column* semicylindrical, decurved, rosy purple.

Lælia autumnalis atrorubens, *Backhouse*, in *Gardeners' Chronicle*, n.s., xii., 232.

Mr. Bateman has well observed that "the genus *Lælia* may be regarded as one of the most ornamental of its tribe, since pleasing colours, graceful habit, long duration, and delicious perfume—in short, all the essentials of floral beauty seem to be combined in its various species." There is, indeed, no doubt that in this genus some of the most showy of our cultivated Orchids are to be found. There are, moreover, species presenting many different hues, varying from yellow to rich purple, and while some of them produce small flowers, in others they are gigantic in size. The subject of our plate, as will be seen from the figure, is a magnificent Orchid, our drawing of which was taken from a well-managed specimen grown by Mr. Stevens, Gardener to W. Thompson, Esq., The Grange, Walton, Stone, Staffordshire. This particular variety was imported in 1878 by Messrs. James Backhouse & Son, of York, who grow it to great perfection.

There are many known varieties of *Lælia autumnalis*, but the one before us is by far the most beautiful of them all, being superior both as regards the size and the colour of the flowers. The pseudobulbs of this form, too, are much stouter and stronger than those of the type form. This variety, as also does the original *Lælia autumnalis*, blooms during the autumn and winter months, when flowers are in great request.

Lælia autumnalis atrorubens is a compact-growing evergreen plant, the pseudobulbs of which, with the foliage, attain to about ten inches in height. The flower-

spikes are produced from the apex of the bulb just at the period when it has completed its growth; they each produce several flowers, which are of large size and stout substance, and of a rich crimson-magenta or purple-crimson colour, and last two to three weeks in perfection.

This plant grows naturally in exposed situations, and on this account, no doubt, we find that it likes plenty of sun and as much light as possible, just enough shade being given to prevent the foliage from burning. The conditions best suited to it are that it should be planted in a basket or pan, and suspended from the roof of the cool house; or if fastened to a block placed on a damp wall, this will suit it equally as well. It should receive a copious supply of water during the growing season; and in warm weather syringing will be found beneficial to it in the morning, and also when the house is shut up in the afternoon.

Orchids at the Manchester Exhibition, May, 1882.—The Orchids were a marvellous sight, and probably such a magnificent display of these glorious plants was never before seen. The plants, many of which bore grand masses of blossom of many rich shades of colour, were arranged along both sides of the large Exhibition house in the Gardens at Old Trafford, and had been brought together from different parts of the country, as well as from the vicinity of Manchester. Everyone who possesses a taste for horticulture—and especially for the wonderful productions of nature which have been brought from distant lands by our plant collectors, and are transmitted to our exhibitions both by amateur growers and nurserymen, so that the public may be able to see all these treasures at one view—should avail themselves of the opportunity of witnessing this exhibition. The entrance fee is only one shilling, and besides Orchids there is always provided a grand display of other plants, too numerous to mention. It is gratifying to learn that 51,000 persons availed themselves of the opportunity to visit this grand show of 1882. We may venture to add that the Council of the Manchester Botanical and Horticultural Society, and Mr. Findlay, the Curator of the Gardens, are doing a great benefit to the horticultural world, as well as to the general public, by bringing such multitudes of fine plants together, while at the same time they secure a good revenue for carrying on the gardens, and afford much gratification to the subscribers, who can thus at their ease feast their eyes upon nature's beauties to an extent they could not do even if they travelled to the various native habitats of the plants—for even there no one could possibly witness such a diversified display at one point. The best advice we can give to those who are fond of flowers is to go next year and see for themselves, as the specimens are too numerous to be mentioned in our limited space. The show is held annually, and continued during Whit-week, the last being the sixteenth anniversary.—B. S. W.

J.Nugent Fitch del.et lith.

ZYGOPETALUM CLAYII.

J.Nugent Fitch imp.

ZYGOPETALUM CLAYII.

[Plate 50.]

A Garden Hybrid.

Epiphytal. *Pseudobulbs* oblong, furrowed, two to three inches long. *Leaves* lorate-lanceolate, narrowed towards the base, nervose, persistent, about a foot and a half in length when mature. *Scape* radical, many-flowered, as long as the leaves. *Flowers* large and very showy; *sepals* oblong, lanceolate, acute, the lateral ones spreading, purplish brown, with green margin and indistinct transverse bands, forming broad blotches, which are often obscurely defined; *petals* narrower, lanceolate acute, directed forwards, of the same colour as the sepals; *lip* broad, obcuneate, emarginate, bent upwards abruptly at the base towards the column, so as to form a blunt chin, and again bent downwards, having two projecting points or auricles at the back, the front portion narrow at the base, nearly one and a half inch wide, indistinctly three-lobed, furnished on the disk with a raised plaited ruff or frill, the colour in the best forms a deep violet-purple, with darker purple lines. *Column* stout, with two small incurved lobes just below the anther bed, dark mottled purple behind, and streaked with purple in front.

Zygopetalum Clayii, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., vii., 684.

It gives us great pleasure to be able to figure one of the finest hybrid Zygopetalums that has yet been raised in this country, and one, moreover, which is totally distinct from any other member of the genus. The plant will be appreciated by growers of Orchids on account of the uncommon colour of its lip —blue being a colour that is seldom met with amongst Orchidaceous plants, but one which is, nevertheless, in great request.

The present novelty was raised by Colonel Clay, of Birkenhead, some few years ago, and was the result of a cross between *Zygopetalum crinitum* and *Z. maxillare.* The hybrid was exhibited at one of the meetings of the Royal Horticultural Society, in May, 1877, and was awarded a Certificate of Merit. Since that time we have acquired the stock of this plant from Colonel Clay, and have bloomed several specimens. The form represented by our artist in the accompanying plate bloomed in the Victoria and Paradise Nurseries in March last. We have also bloomed another variety, somewhat different from the foregoing in the markings, the colours being the same; the lip was in this case slightly blotched, and the sepals and petals were suffused with brown.

Zygopetalum Clayii is a free-growing evergreen plant, with foliage reaching to about eighteen inches in height. It produces its flowers at different periods of the year, at the time when it is starting into growth. The flowers are borne in

upright spikes from the base of the young growths. The sepals and petals are brownish purple, with a narrow green border, and sometimes distant cross lines of green, while the lip is broad, and of a dark purplish blue. The plant lasts in bloom for about two months.

It is a very free-growing Orchid, requiring exactly the same treatment as *Zygopetalum Mackayi*, and other familiar species. The Cattleya house will be found to suit it best, and it should be grown in a compost of good fibrous loam with a little leaf-mould added. Being naturally a strong fleshy rooting plant it requires a good supply of water during the growing season. It is best cultivated in a pot.

Orchids at New-Hall-Hey.—When visiting the collection of G. W. Law Schofield, Esq., New-Hall-Hey, Rawtenstall, near Manchester, we noticed the finest variety of *Dendrobium lituiflorum* we have ever seen. It bore seventy of its lovely showy blossoms, the sepals and petals of which were of a very dark purple colour, and the lip white, edged with purple; this was one of the richest coloured Orchids we have seen. We also noticed a grand variety of *D. crassinode superbum*, each blossom being three and a half inches across, and of a very good colour. Associated with this was *D. MacCarthiæ*, which one seldom sees, though it bears some of the most beautifully bright pinkish rose and white flowers that can be imagined, and they are of good size and substance. Of *Odontoglossum vexillarium* there was a plant which had upon it forty-one of its richly coloured flowers, each measuring four and a half inches across. In the Cattleya house was a very fine *Cattleya Mossiæ grandis*, with sepals and petals of a delicate rose colour, and the lip large, of a rich magenta, with a lighter margin, each blossom measuring eight inches across. There is here a newly erected house for Cattleyas, which are doing well, and reflect great credit upon Mr. J. Wise, the gardener, who takes very great interest in his plants, everything being kept in good order.—B. S. W.

Cattleya gigas burfordiensis.—We noticed a wonderful example of *Cattleya gigas burfordiensis* at a recent meeting of the Royal Horticultural Society. It was exhibited by Sir Trevor Lawrence, Bart., M.P., and was deservedly awarded a First Class Certificate. The plant bore four very fine blossoms, each measuring more than eight inches in diameter; the sepals and petals were of a beautiful rose colour, the lip large, three inches across, and of a deep amethyst colour, edged with dark purple-rose, the throat being orange, and the upper portion folded over the column of the same rich rosy purple colour as the lip. The plant was in a very vigorous state of growth, and the flowers stood up well, so as to give it an imposing appearance. It is no doubt one of the finest of the Cattleyas.—B. S. W.

ŒLIA BELLA.

J.Nugent Fitch imp

CŒLIA BELLA.

[Plate 51.]

Native of Guatemala.

Epiphytal. *Pseudobulbs* roundish-ovate, sub-compressed, pale green, the older ones oblong-ovate. *Leaves* of a light green colour, about ten inches in height, three or four from the top of the pseudobulb, narrow ensiform acuminate, plicate, five-ribbed, convolutely sheathing at the base. *Scape* radical, short, clothed with bifarious sheathing bracts, four to seven-flowered. *Flowers* of moderate size, tricoloured, emitting a very sweet odour, the *perianth* tubular below, funnel-shaped above, the *bracteoles* oblong, obliquely dimidiate; *sepals* and *petals* similar, somewhat fleshy in texture, creamy white tipped with magenta-rose, the upper sepal shorter, oblong obtuse, terminating abruptly at the pedicel, the lateral ones produced behind into a blunt spur adnate to the base of the column; *lip* yellow, produced at the base, and abruptly replicate, forming a cucullate cavity enclosed within the spur, oblong, three-lobed, the lateral lobes short quadrate, the middle lobe linguiform acute, with a large fleshy orange-coloured convex callosity occupying the disk. *Column* white, broadly cuneate, three-toothed at the apex.

Cœlia bella, *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 218; *Hooker fil., Botanical Magazine*, t. 6628.

Bifrenaria bella, *Lemaire, Jardin Fleuriste*, iii., t. 325.

Bothriochilus bellus, *Lemaire, L'Illustration Horticole*, iii., 30.

We have in this plant a representative of a small genus of Orchids, few of the species of which are worthy of cultivation. That now before us is, however, a very pretty and curious plant, as will be seen by a glance at our plate. We believe that *Cœlia bella* was introduced about thirty years ago by the Messrs. Loddiges, of Hackney, but at the present time it is extremely scarce. Lemaire, by whom it was described and figured in 1853, in the volume of *Jardin Fleuriste* above quoted, states that it was introduced about the same period, from the Island of St. Catherine's, to the Belgian Gardens, by M. Ambroise Verschaffelt, through his collector, M. F. Devos, but Sir Joseph Hooker has recently pointed out that there are specimens of it in Lindley's Herbarium, collected in Guatemala by Mr. Skinner, and that, like its congeners, it is probably a native of Central America. For the opportunity of preparing our figure, we are indebted to the courtesy of J. C. Bowring, Esq., Forest Farm, Windsor Forest, by whom it is flowered freely every year.

Cœlia bella is a compact-growing evergreen plant, with small globose or ovoid pseudobulbs of a light green colour. The ensiform foliage is also light green, and grows about ten inches high. The flower-spikes proceed from the base of the

pseudobulbs, and produce four to seven funnel-shaped flowers on each spike. The sepals and petals are of a creamy white hue, tipped with rich magenta, while the lip is yellow, the whole perianth being very thick and fleshy in texture. The plant produces its blossoms during the autumn months, and succeeds well if cultivated in a pot with plenty of good drainage; fibrous peat should be used for potting, and a liberal supply of water should be given during the growing season, which is just after the flowering period.

The temperature of the Cattleya house will be found to suit this *Cælia*, or it may be grown in a moist stove. We have often seen plants of this kind do better in a house wherein miscellaneous stove plants are grown than in the Orchid house, which we believe is owing to their obtaining under these conditions more moisture and light, two things in which most Orchids delight. We mention this in order that cultivators may know and understand that there are various Orchids which can be grown, and grown well, in company with other subjects in an ordinary plant stove. We ourselves have found that many of the species do best in a house where such plants as Crotons, &c., are grown. Dendrobiums especially like this treatment, under which the bulbs attain much larger dimensions, and become better ripened. It is quite an erroneous idea that Orchids all require special houses for their successful cultivation. This certainly is not the case, as some of the finest Cattleyas, Vandas, Dendrobes, Phalænopsis, &c., that we have ever met with, have been cultivated in ordinary plant stoves, where they get a little shade from the burning rays of the sun.

Cattleya Warnerii.—A well-bloomed plant of this noble Orchid was exhibited at the Royal Horticultural Society, South Kensington, on June 13th, by C. L. Southgate, Esq., of Streatham. This specimen was an example of what can be produced by giving a plant the treatment it likes—for such must have been the case in this instance. The plant was in an eight-inch pot, and bore three fine spikes of blossoms, one having six, another five, and the third four flowers upon it, all expanded. The sepals and petals were of a beautiful rose colour, the lip a rich crimson, finely fringed, and marked with orange on the upper part. It was altogether a very striking object, and was greatly admired for the profusion of blossom produced in so small a pot. We mention this plant in order that our readers may know how abundantly it can be bloomed, as we often hear cultivators say that it does not flower freely, a theory which in this case must undoubtedly be wrong. The freeness of blooming evinced by this plant may be owing to the smallness of the pot in which it is grown; it may, therefore, be well for others to follow Mr. Salter's example in this respect, since he has been so successful in cultivating it.—B. S. W.

J. Nugent Fitch del. et lith.

ODONTOGLOSSUM MACULATUM.

J. Nugent Fitch imp.

ODONTOGLOSSUM MACULATUM.

[Plate 52.]

Native of Mexico.

Epiphytal. *Pseudobulbs* oblong, compressed, usually bearing a solitary leaf, other leaves with equitant articulated petioles investing the bulb. *Leaves* oblong, acute, five to seven nerved, of a parchment-like texture, and a bright green colour. *Scape* radical, bearing a many-flowered pendulous or semi-erect raceme, furnished with boat-shaped brownish herbaceous bracts shorter than the ovaries. *Flowers* prettily spotted, about two and a half inches in breadth, and upwards of three inches in depth; *sepals* linear-lanceolate, acuminate, green or stained with brown outside, chestnut brown within, marked with green transverse bars at the base; *petals* oblong undulate acuminate, chrome-yellow, thickly spotted with brownish red on the basal half; *lip* unguiculate, cordate acuminate, sub-crenate, of the same colour as the petals, with a concave two-valved emarginate purple-veined appendage on the claw. *Column* white, pubescent, obsoletely auriculate near the apex.

Odontoglossum maculatum, *Lindley, Botanical Register*, 1840, t. 30; *Id., Folia Orchidacea*, art. *Odontoglossum*, No. 11; *Pescatorea*, t. 28; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 829; *Bateman, Monograph of Odontoglossum*, t. 20; *Floral Magazine*, t. 348 (as maculosum); *Williams, Orchid Grower's Manual*, 5 ed., 237.

The Odontoglossums are amongst the most popular of Orchids. They are not only esteemed for their fine showy flowers but for their long lasting qualities, and they can nearly all be grown in houses with a low temperature. The species we now bring before the notice of our readers is a most distinct and desirable one, which has been known in cultivation for many years. The drawing from which our plate was prepared was taken from a plant that flowered in the collection of W. Salt, Esq., of Ferniehurst, Shipley, Yorkshire, who has a grand lot of cool Orchids, which are, moreover, exceedingly well cultivated.

Odontoglossum maculatum is not only free but compact in its growth. It has thick fleshy pseudobulbs, and light green foliage, and the individual plants produce their sub-erect spikes of flowers at different times of the year, according to the period of the completion of their growth. The flowers are very strikingly beautiful, being of a colour that one seldom sees in Orchids, and they continue for a long time in perfection when protected against damp. The colour, however, varies in different plants. The form originally figured in the *Botanical Register* has the sepals green outside, and chestnut-brown within; that published in the *Pescatorea* has the sepals represented as brownish purple in front, paler purple behind, with green tips on both surfaces; and the form figured in the *Floral*

Magazine, if correctly rendered, had the greenish sepals indistinctly spotted with brown.

This species, as do many other Mexican Orchids, likes a light position, with plenty of air on warm days, and a good supply of water during the growing season. Propagation is effected by division of the pseudobulbs in the usual way.

Death of Richard Barton Dodgson, Esq., Beardwood, Blackburn.—We are very sorry to have to record the death of one who has done so much for horticulture as our good friend Mr. Dodgson. All who knew him must feel deeply grieved at the loss of such an amiable and kind-hearted gentleman—for such he was, not only to us, but to all who came into contact with him; of this, the expressions of gratification that have emanated from all who have paid Mr. and Mrs. Dodgson a visit, supply abundant evidence. The reception given by him to Gardeners, Nurserymen, &c., when calling to see his collection of plants, was always a most cordial one, and whether it was to one or a dozen persons it never varied. All who were acquainted with Mr. Dodgson know how fond he was of his Plants, especially his Orchids. In the collection at Beardwood there are some of the finest specimens that can anywhere be seen, and also many rare varieties that are not to be met with elsewhere. This collection has been forming for many years, and it was always Mr. Dodgson's study to procure the best kinds possible. Many persons will be able to recall the fine specimens exhibited from Beardwood at the Manchester, Blackburn, and Preston Shows, and will recollect that when the Royal Horticultural Society held their large Exhibition at Preston, Mr. Dodgson took most of the first class honours in the classes in which he exhibited. He was most kind and liberal to his Gardeners, giving them every encouragement in carrying out their duties, and they in their turn, were always ready to wait upon him. During his illness he would often express a wish to see his favourite plants as they came into bloom, and these were accordingly taken into his bedroom by his Gardener, and proved a great source of delight to him in the midst of his severe sufferings. We regret that the available space in the *Album* is so limited or we should have said more. We have figured and described from time to time some fine plants from the Beardwood collection, and we have yet other illustrations taken by our artist, which will be published at some future time. We must again express our deep and sincere regret at the loss of such a devoted patron of Horticulture.—B. S. W.

ADA AURANTIACA.

[PLATE 53.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* sub-cylindrical, tapering upwards, three to four inches long, sheathed with reddish scales at their base. *Leaves* terminal, channelled, broadly linear, four to six inches long, one to three in number. *Scape* terminal, longer than the leaves, bisquamate, bearing a drooping spike of from ten to fourteen rather distichously placed flowers, which have each a scariose lanceolate-subulate bract at its base. *Flowers* brilliantly coloured, the perianth closed below, and only opening in the upper part; *sepals* sub-equal, of a bright orange or cinnabar-red, spreading only from above the middle, linear-lanceolate, much acuminate, the lateral ones somewhat oblique at the base; *petals* smaller, but similar in form and colour; *lip* of the same bright orange-red, undivided, parallel with the column, and adnate to its base, lanceolate, shortly acuminate, scarcely half the length of the sepals, with a crest formed of two connate membranaceous lamellæ, pubescent inside near the base. *Column* short, thick, wingless; *anther case* hemispherical; *pollen-masses* two, obovate, seated on a cuneate caudicle, arising from a gland.

ADA AURANTIACA, *Lindley, Folia Orchidacea*, art. *Ada*; *Hooker, Botanical Magazine*, t. 5435; *Bateman, Second Century of Orchidaceous Plants*, t. 113; *André, L'Illustration Horticole*, 3 ser., t. 107; *Williams, Orchid Grower's Manual*, 5 ed., 62.

MESOSPINIDIUM AURANTIACUM, *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 857.

This is the only member of the genus *Ada* with which we are yet acquainted, and even this is by some authorities referred to *Mesospinidium*. Whether forming a distinct genus or not, it is a well marked and charming Orchid, one by means of which a fine contrast of colour can be insured in the arrangements made for the decoration of our Orchid houses. The accompanying plate was taken from a fine specimen which bloomed in the Victoria and Paradise Nurseries, but as our page is limited in size only a portion of the plant could be represented. This plant bore twenty of its graceful and brilliantly-coloured spikes of flowers. When thus successfully cultivated no one could fail to admire the *Ada aurantiaca*, the more so as it is one of the Orchids which thrive in a cool house, and plants can be purchased at a very small cost.

Ada aurantiaca is an evergreen species of remarkably free habit. It grows about ten inches high, and has foliage of a fine dark green colour. It produces its flower spikes from the young growths, between the leaves, one or two together, the spikes being drooping towards the extremity and the flowers of a bright

orange-scarlet colour. These flowers are produced during the winter and spring months, and last for several weeks in perfection.

The species is a native of New Grenada, where it is found at the great elevation of 8,000 feet, consequently it will grow well with Odontoglots under cool treatment. Some years ago it was very rare, but now, thanks to our collectors, it is more plentiful, and hence has become popular. It is a most important decorative plant on account of its colour, which, as a contrast, is especially useful when placed amongst the Odontoglots. We have found it most effective when it is brought into close association with the delicate colours of *O. Alexandræ* and *O. Pescatorei* the effect obtained by the intermixture is altogether charming.

The *Ada* requires the same treatment as the Odontoglots. The potting material best suited to its growth is good fibrous peat, with plenty of drainage. It will thrive either in a pot or in a basket, and in potting it should be well elevated above the rim, so that the roots can work freely among the material in which it is potted. The soil should be kept moist during the growing season, but on no account must the moisture be allowed to become stagnant, a condition which can be prevented by using charcoal mixed with the peat, which will keep the drainage open, and allow the water to pass off. If the soil should by any mischance become soddened it must be removed and fresh soil made use of, the roots at the same time being well washed previously to repotting.

Shade is very essential to the well being of the foliage, as the leaves are apt to go spotted if the sun is permitted to shine upon them. In its native country it is found in shady places, and hence will not bear full exposure, although in its artificial home it likes all the light possible.

Aërides Lobbii Ainsworthii.—We have received a grand spike of this beautiful Orchid from R. F. Ainsworth, Esq., M.D., of Lower Broughton, Manchester. It is one of the darkest and best varieties that has come under our notice. The same plant was exhibited a few years ago at the Royal Horticultural Society's Show at Preston, and it was the admiration of every one who saw it. Mr. Mitchell, the gardener, informs us that it blooms in the same style every year. The spikes are more than two feet long, and well branched, while the colour of the flowers is very bright and effective, so that it makes a fine exhibition plant. This variety is much darker and brighter in its markings than the type.—B. S. W.

ODONTOGLOSSUM CRISTATA ALBA.

J.Nugent Fitch

CŒLOGYNE CRISTATA ALBA.

[Plate 54.]

Native of India.

Epiphytal. *Pseudobulbs* oblong, becoming somewhat angulate, growing from a thick scaly rhizome, diphyllous. *Leaves* linear-lanceolate, somewhat flaccid. *Scape* radical, erect, bearing a drooping raceme of three to five flowers, furnished at the base with dry brown imbricated scales; *bracts* oblong, persistent, sheathing the stalked ovaries. *Flowers* large, fragrant, about four inches in diameter; *sepals* oblong-lanceolate, acuminate, undulate, white; *petals* similar to the sepals in form and colour; *lip* three-lobed, concave, everywhere pure white, the lateral lobes half oblong, truncate at the upper end, and somewhat broader than the small middle lobe, which is transversely roundish and obtusely dentate; on the disk are five parallel veins or lamellæ covered by delicate fringes, which are also white, the three central ones having a wavy plate at their base, while in front of the two which stand on each side the middle vein is a solid plate terminating abruptly.

Cœlogyne cristata alba, *Hort.*; *Moore*, in *Gardeners' Chronicle*, n.s., xv., 442; *Id.*, n.s., xv., 511; *Id.*, n.s., xvii., 153.

Cœlogyne cristata hololeuca, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xv., 563; *Bull, Catalogue of New Plants, 1882*, 100.

All Orchidists know well the old type of *Cœlogyne cristata*, which has been in cultivation for many years, and which is one of the most useful plants we have for winter decoration. In the novelty we now introduce we have a pure white form of this plant, which is a most charming addition to our collections, and which will assuredly be sought after by all Orchid growers. We are indebted to the kindness of Mr. W. Bull, of the King's Road, Chelsea, for the opportunity of figuring this choice variety. It was first made known last year at the Regent's Park Spring Exhibition, by Mr. J. D. Richards, gardener to T. A. Titley, Esq., Gledhaw, Leeds, who obtained for it a well merited First Class Certificate, and shortly after the plant passed into the hands of Mr. Bull, who gained another Certificate with it at South Kensington, and has the honour of having introduced to the public a most lovely novelty. The variety is extremely rare, Mr. Bull having only a very limited number of plants. As will be seen from our plate it will make a most useful plant for cutting, since pure white flowers are so highly appreciated for bouquets and other decorative purposes.

The new variety is in all respects similar to the type, save in the absence of the yellow blotch upon the lip. It is a compact-growing evergreen plant, attaining the same dimensions as regards foliage and bulbs as *Cœlogyne cristata* itself, and

producing its pure white spotless flowers in the same manner, four or five together on a drooping spike; it blossoms during the winter and spring, and lasts for two or three weeks in beauty if the flowers are kept dry. It is both a free-growing and a free-blooming plant, and will no doubt thrive either in the Odontoglossum or Cattleya house. If cultivated in a cool house we should recommend that the plants be taken into a warmer structure when they begin to show flower. We have always found *C. cristata* to be greatly benefited by this treatment, as the spikes are apt to damp off in too cool an atmosphere; moreover, on account of their pure white colour they seem to absorb the cold damp more quickly and readily than many other flowers, and this of course soon disfigures them.

We have found good fibrous peat the best material in which to grow *Cœlogyne cristata*, and no doubt the variety we now figure will require the same treatment, as the two forms are found growing together in their native country. Pot culture will suit them best, as they require a good amount of water at their roots during their growing season, which can thus be secured. After the growth is completed less water will suffice, but they must always be kept so far moist at the root that their bulbs may remain in a plump firm condition.

Orchids at Fallowfield.—In this, which is one of the noted collections near Manchester, *Dendrobium Falconeri* was the first plant that attracted attention; it is a choice kind, and there was a fine specimen of it with two hundred of its bright purple, white, and orange-coloured flowers in full beauty. This was an exceedingly well cultivated plant. Mr. Swan, the gardener, informs us that he has had this specimen for several years under cultivation, and that it improves each successive season, and has been several times exhibited at the Manchester Shows. We mention this in order that our readers may understand that this species can be cultivated successfully for years with proper treatment. We also noticed the charming *Thunia Bensoniæ*, with many spikes of its reddish purple flowers, some of the spikes producing as many as eighteen flowers on each spike. When grown in this way it forms a grand object of attraction, especially as we possess but few Orchids of the same colour. We also noticed some fine spikes of *Oncidium macranthum*, bearing its bright yellow flowers, and when grown among the plants of *Odontoglossum Alexandræ*, with their pure white blossoms, it produces with other flowers a good effect. We also saw in the East India house some fine plants of *Aërides Lobbii* finely in bloom, some of their racemes of bright coloured flowers being three feet in length and branched. *A. crassifolium* was in full beauty; it is one of the best of its family, and one that should be grown in every collection, as it occupies such a small space.—B. S. W.

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SCUTICARIA STEELII.

[Plate 55.]

Native of British Guiana.

Epiphytal. *Rhizome* short, articulated, branched, ebulbous, the branches monophyllous. *Leaves* flagelliform, as thick as a swan's quill, channelled, subulate at the apex, two to four feet long, drooping. *Scape* radical, short, one to three flowered. *Flower* large, fragrant, with the perianth connivent; *sepals* oblong, the lateral ones produced at the base into a blunt chin, pale primrose-yellow, blotched with deep reddish brown; *petals* of the same form and colour as the sepals; *lip* three-lobed, pale yellow, striately marked with brownish crimson, especially on the lateral lobes, which are roundish erect, the intermediate one bilobed, with roundish, subcuneate, divergent divisions, and bearing at the base an oblong callus having three obtuse orange-coloured teeth in front. *Column* semiterete, decurrent with the base of the lateral sepals, so as to form a blunt spur or chin; *pollen-masses* four, sessile, in pairs, on a dilated transverse gland, acuminate at both ends.

Scuticaria Steelii, *Lindley, Botanical Register*, xxix., misc.; p. 14; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 551; *Williams, Orchid Grower's Manual*, 5 ed., 292.

Maxillaria Steelii, *Hooker, Botanical Magazine*, t. 3573; *Lindley, Botanical Register*, t. 1986.

This is a small genus of Orchids separated from *Maxillaria* by Dr. Lindley, and generally adopted. The few species are distinct in their habit of growth, as also in reference to the manner in which they produce their flowers. That which we now figure is one of the best as yet known. Our drawing was taken from a plant in the collection of W. McDonald, Esq., Woodlands, Perth, who has many fine specimen Orchids, and among them some choice species. We may state that Mr. McDonald often sends us specimens of beautiful Orchids, such as we are always very glad to receive from any growers, either for the purpose of naming, or with the view to their illustration in the *Album*.

Scuticaria Steelii is a native of British Guiana. The foliage is terete, pendulous, and of a dark green colour, three to four feet in length, and tapering off to a point; in fact it is almost like a rush in its form. The flower spikes proceed from the rhizome at the base of the leaves; they are about two inches high and generally three-flowered. The sepals and petals are yellow, irregularly spotted with brownish crimson, while the lip is yellow, striped with crimson. The plant blooms at different times of the year, and continues a long time in perfection. When in flower it is a very attractive object, those who see it in bloom being astonished to find such a beautiful inflorescence proceeding from the peculiar rush-like foliage,

and when hanging from the roof of the house the whole plant has a very singular and handsome appearance.

The plants thrive best grown on blocks of wood, with a little live sphagnum moss about their roots; if the moss should become decayed it must be removed and renewed by fresh. They will also grow on rough blocks of wood without moss, but when cultivated in this way they require the more frequent application of moisture to keep their roots active. We have seen them thrive well in baskets, planted in rough fibrous peat, but grown in this way they do not look so well. They should be hung up as near to the glass as possible, in the full light, as they require but little shade. They will do either in the Cattleya or East India house. A good supply of water must be given during the growing season, but less when their growth is completed. These plants are not easy to increase, as they do not like to be divided.

Orchids at Chislehurst.—When calling in July last on W. Vanner, Esq., at Camden Wood, Chislehurst, we were pleased to find some beautiful Orchids in bloom in the show house, which is a square lofty structure, with tables round the sides, and chairs and seats in the centre. The Orchids are here shown off to the best advantage, intermixed with foliage and flowering plants, the flowering Orchids being brought into this house as they come into bloom. We noticed some fine plants of *Lælia purpurata* in full beauty, one variety with rose-coloured sepals and petals, and a beautifully veined rich dark amethyst lip, was especially fine. *Cattleya Mendelii* was well represented, one plant having six spikes of bloom—a grand plant and the picture of health. *Lælia elegans* was also in bloom, a fine large variety, with a very richly-coloured lip. We also saw here two specimens of the finest varieties of *Odontoglossum hastilabium* we have ever met with, having large branching spikes, one with seventy flowers upon it; the sepals and petals were creamy white, barred with purple, the lip white, with a purple base. This is a grand exhibition Orchid, as it lasts a long time in perfection.

In the next house were some fine plants of *Odontoglossum Alexandræ;* one variety in particular was very fine, having rose-coloured sepals and a very large finely spotted lip. The Bull's-blood variety of *Masdevallia Harryana* was in good form; also *M. Harryana læta* and *M. Harryana lilacina*, a very pretty light-coloured variety, with rosy lilac flowers. *Sobralia macrantha* was also very finely in flower, as well as many other good things in bud, or making good growth for another year.—B. S. W.

JACOBINIA GIGANTEUM.

J.Nugent

SACCOLABIUM GIGANTEUM.

[PLATE 56.]

Native of Burmah.

Epiphytal. *Stem* short, producing from the basal portion thick fleshy roots. *Leaves* subsecund, leathery, broadly lorate with the apex oblique and bilobed, about a foot long and two inches broad, channelled, the surface streaked. *Racemes* densely flowered, drooping, about equalling the leaves in length, axillary. *Flowers* very numerous, handsomely spotted, and remarkably fragrant, with broad, short, membraneous bracts at their base; *sepals* oblong or cuneate-ovate, obtuse, white, with a few amethyst dots; *petals* narrower, obovate, white, more freely spotted with amethyst; *lip* wedge-shaped, dilated, and trifid at the apex, the central portion short, ligulate, and slightly retuse, and the lateral parts semi-rhomboidal, all being of a beautiful mauve-violet or magenta colour, veined with darker lines; from the short conical spur two elevated hairy lines pass outwards, diverging in the middle, and reuniting at the contracted portion of the lip. *Column* greenish, short, reclinate, the anther with a stout beak.

SACCOLABIUM GIGANTEUM, *Lindley*, in *Wallich's Catalogue*, 7306; *Id.*, *Genera and Species of Orchidaceous Plants*, 221; *Bateman*, in *Botanical Magazine*, t. 5635; *Jennings*, *Orchids*, t. 8; *Williams*, *Orchid Grower's Manual*, 5 ed., 287.

VANDA DENSIFLORA, *Lindley*, in *Paxton's Flower Garden*, under t. 42; *Id.*, *Folia Orchidacea*, art. *Vanda*, No. 22; *Van Houtte*, *Flore des Serres*, tt. 1765-66; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 869.

There can be no doubt as to the position that the Saccolabiums occupy in the Orchid family—they certainly rank among the very finest of the whole race. They are not very numerous, but among the known species there are some which are of great beauty. They used to be exhibited in splendid style some quarter of a century ago by the late S. Rucker, Esq., of Wandsworth, Mrs. Lawrence, of Ealing Park, Dr. Butler, of Woolwich, and also from other fine collections then in existence, at which time there was seldom an exhibition group staged without a fine specimen of *Saccolabium guttatum*, or some other equally fine species. Now, however, we rarely see them shown. Orchid growers appear to have forgotten this noble class of plants, and many beginners think that they are difficult to cultivate, but we ourselves have never found them to be so, and, together with other nurserymen, we are growing and selling specimens every year. Where can the greater part of these go to? Why they are purchased by foreigners, who seem to have a greater taste than we have in this country for these most wonderful of all Orchids, which even when not in bloom are objects of attraction from their

noble aspect and graceful foliage. Our illustration of *S. giganteum* was taken from a plant which bloomed in the Victoria and Paradise Nurseries, Holloway. It blooms during the winter months, which adds to its value, as there are but few Saccolabiums which flower at that season of the year. The species, at first referred to *Saccolabium* by Lindley, was afterwards transferred by him to *Vanda*, under the name of *V. densiflora.*

Saccolabium giganteum is a slow growing plant, and makes about three leaves a year; from the axils of these the flower spikes emerge, and extend to the length of ten or twelve inches. The plant continues in bloom for about six weeks, the flowers, moreover, are deliciously fragrant, which is an additional recommendation, indeed this species possesses all the good qualities a plant can possess, and, if strong, blooms freely when only a few inches high. We have seen a very fine specimen of it in the beautiful collection of C. Walker, Esq., Brettagh Holt, Milnthorpe, bearing many flower spikes, all of good length; it was a noble object, one that Mr. Walker might well be proud of. We were surprised three years ago to receive, amongst some imported masses, one which stood three feet high, forming quite a pyramid of young growths, and carrying from twenty to thirty spikes; other masses were also of great size.

We have found this *Saccolabium* to grow well in the East India house, where the temperature by fire-heat during winter is kept at about 60° during the night and 65° during the day. When the sun causes the heat to rise above this, air should be given, avoiding cold draughts. The plants require plenty of light, but must be shaded during the spring and summer months, when the temperature should be about 65° by night and 70° by day, or with sun-heat 75°. During June, July, and August it should range from 70° to 75° by night and 75° to 80° by day. The house should be moistened twice a day in summer—in the morning and in the afternoon, about three or four o'clock, when it may be closed for the night, always, however, keeping a certain amount of air on, but not sufficient to interfere with the temperature.

We find the best material for growing the Saccolabiums in is fresh clean sphagnum moss, with good drainage. If grown in pots these should be nearly filled with drainage material, and the plants placed on sphagnum moss and kept well elevated above the pot rim. They will do well in baskets suspended from the roof, so that their roots can hang in the moist atmosphere. They require a good supply of moisture during the summer season, and also in autumn, but in winter less will suffice, indeed during this season they must never be allowed to get too wet, though the moss must be kept damp. They have no thick fleshy bulbs to fall back upon for support, and therefore if they are allowed to become too dry they will shrivel, and lose their lower leaves, which is a great disfigurement. The plants must always be kept free from insects.

Nugent Fitch del et lith

PESCATORIA HERMANNI

PESCATOREA LEHMANNI.

[Plate 57.]

Native of the Andes of Ecuador.

Epiphytal. Stems none, or consisting of a short crown or growing point, from which the leaves, with their narrowed overlapping bases and the stout fibrous roots proceed. *Leaves* lorate-lanceolate acute, upwards of a foot long, and from an inch to an inch and a half wide, of thin, firm texture, ribbed. *Scapes* radical, much shorter than the leaves, bracteate, one-flowered. *Flowers* large, upwards of three inches across, showy, white striped with purple; *sepals* and *petals* broadly cuneate oblong, obtusely rounded, with a short projecting point, white, with contiguous curved parallel lines of reddish purple extending nearly to the edge; *lip* deep mauve-purple, the basal segments small, triangular, erect, the interposed calli forming a ruff of chestnut-brown, consisting of about eleven ridges, the anterior mauve-coloured portion oblong, revolute, retuse, covered with lines of long bristle-like purple papillæ. *Column* stout, curved forwards, purple and rounded behind, brown in front, the anther case whitish green.

Pescatorea Lehmanni, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xii., 424.

Zygopetalum Lehmanni, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xii., 424.

The genus *Pescatorea* is one of recent introduction. A few years ago the plants referred to it were unknown, but latterly they have been met with by botanical collectors, and have gradually found their way to our Orchid houses, some very beautiful species being included amongst them. *Pescatorea Lehmanni*, represented in the accompanying illustration, is one of these. It was exhibited a short time since at the Royal Horticultural Society, South Kensington, by Messrs. Vervaet & Co., Nurserymen, of Ghent, Belgium, and on that occasion was deservedly awarded a First Class Certificate. It was from this specimen, which was a well-grown one, that our plate was taken. The plant was grown on a block of wood, and thus placed had a really beautiful and attractive appearance. The species was collected by Mr. Lehmann, in whose honour it is named, and who has sent home many fine Orchids.

Pescatorea Lehmanni is an evergreen plant, with broadish light green ribbed foliage, which grows from twelve to eighteen inches in height. The flowers are produced from the axils of the leaves at the base of the very short stem, several proceeding from each tuft; they have the sepals and petals white, striped with purple lines, while the lip is mauve-coloured, covered with a number of hair-like papillæ, and having a rich brown ruff or throat. The plant blooms after it has completed its growth, and the flowers continue fresh for some considerable time; it appears to yield its blossoms at different times of the year.

These plants are not generally well cultivated, but in the case of those we saw at Messrs. Vervaet's there seemed to be no difficulty about it. They were fixed on blocks of wood, which appears the most natural method of cultivating them; and no plants could be thriving better, producing finer foliage, or flowering more profusely than these. The appearance they presented when hanging from the roof was very charming, as the flowers and plants both seemed to be in their natural position, which of course conduces greatly to success in their cultivation, wherein it is wise in most cases to follow natural habits as closely as possible. They are found in their native country growing on the branches of trees in moist places, and in consequence when suspended from the roof they require abundance of water, which can easily be applied with a syringe about the roots. We have seen them thrive well on blocks plunged in pots of fibrous peat, but in this way they frequently fail, and after two or three years' growth the plants rot away. Of course there are exceptional cases in which they grow well for a longer period; but they will, we believe, be found to thrive better and last longer in a suspended position, if they get shaded from the sun. Their leaves being broad and thin are apt to become spotted if exposed to the full sun heat, but they like plenty of light, which they get when hanging from the roof, besides which their growth becomes more robust, and their foliage stands better. We find the cool end of the East Indian house to suit them. They require to be watered all the year round, not having bulbous stems to support them, and they take little rest, being generally in full vigour. In winter rather less water may be given, just sufficient to keep them plump.

Insects must always be closely sought after, as the foliage of these plants is tender, such as these pests delight to feed upon. The species are propagated by dividing them where there are one or two back shoots, with a young growth in front.

Watering Orchids.—We have found rain-water to be the best for Orchids and for all kinds of plants, this being the water supplied in their natural habitats. Rain-water is easily to be obtained, by providing tanks under the stages, and allowing the rain-water to enter from the roof; in this way no room is lost. A pump should be attached, in case the water gets low in dry weather, when it can be easily raised to the required height.

The plan we adopt is to have a deep cemented tank in the centre of the house, under the stage, so that the top may be open; this allows the water which is standing in the tank to become somewhat warmed by contact with the atmosphere of the house, which is very beneficial; in fact, Orchids should never be watered with water that has not had the chill taken off, as cold water, especially in winter time, causes spot, and may rot the growths and injure the roots. Into this tank the rain-water runs from the roof, and as we have the New River water laid on as well, when rain-water is scarce we fill up with this, and thereby have a mixture of rain and hard water.—B. S. W.

ODONTOGLOSSUM TRIUMPHANS.

[Plate 58.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* ovate oblong, two to three inches in length, furrowed when old, diphyllous. *Leaves* oblong-lanceolate, acuminate, narrowed to the base. *Scape* arising from the base of the pseudobulbs, elongate, the inflorescence racemose, the flowers having longish internodes between them, and the pedicels each furnished with a small triangular bract at its base. *Flowers* large, handsomely spotted; *sepals* oblong acute, narrowed to the base, deep golden yellow, marked for three-fourths of their length with transverse spots and blotches of rich brownish crimson; *petals* similar in form and colour, somewhat broader, the margins lobulate or sinuate-dentate; *lip* clawed, the limb fiddle-shaped, apiculate, with the point recurved, the margin denticulate, the basal half white with yellow crests, and the anterior portion of a rich brownish crimson, narrowly edged with yellow, the claw bicarinate, the keel running out into crests on the disk, with a pair of larger falcate crests interposed. *Column* white, semi-terete, curved at the tip, with a rhombic minutely erose wing.

Odontoglossum triumphans, *Reichenbach fil.*, *Bonplandia*, ii., 99; *Id.*, *Pescatorea*, t. 46 (less densely blotched, and lip tipped with rosy purple); *Lemaire*, *Illustration Horticole*, t. 609 (as in Pescatorea); *Bateman*, *Monograph of Odontoglossum*, t. 23; ***Williams, Orchid Grower's Manual*, 5 ed., 245.**

The varied phases of beauty which are met with in the genus *Odontoglossum* are quite overwhelming; indeed so many of the species are really fine plants that to describe and illustrate all that are deserving would alone be a heavy task. We have now, at least, before us a species of the *O. luteo-purpureum* group which is quite distinct, *O. triumphans*, which we may observe is one of the most useful to cultivators, since it mixes up so well and forms so fine a contrast in colour with the forms of the *O. Alexandræ* type. The particular variety we now illustrate, and which is a very remarkable one, was kindly sent us by E. Wright, Esq., Gravelly Hill, Birmingham, who has been cultivating Orchids for many years, and who has also sent us blossoms of many other beautiful species. The spike of *O. triumphans* here represented was, it will be seen, a very fine one, having splendidly marked and showy flowers. There are many varieties of this species, some of them being lighter in colour than others; in fact there is an almost endless variation among the imported plants owing no doubt to the chance intercrossing of the parents, which has been effected by insects in their native country, where so many of them are found in contiguous spots. Our home cultivators too are taking a hint from the insect world, and doing much service to floriculture by hybridising some of the

choicest forms of Orchids with remarkably good results. We hope their success will encourage them to continue their pleasing and profitable work.

Odontoglossum triumphans is an evergreen plant, with pseudobulbs from two to three inches in height, and foliage of a light green colour, growing about twelve inches high. The flower-spikes are produced after the plant has completed its growth; in some of the varieties these grow two or three feet in length, with many flowers developed upon them. The sepals and petals are of a golden yellow, barred with brownish crimson; the lip is white at the base, its front portion having a large irregular blotch of brownish crimson. It generally blooms during the spring and winter months, and lasts for six or more weeks in beauty. This is a most useful feature in the Odontoglots, as they can be used for decorative purposes, and can be removed into living rooms without any injury to the plant or flowers if due care be taken—that is to say, the heat need not be higher than from 45° to 50°, they must not be placed near gas, and the roots must be occasionally moistened.

As an example of the power of endurance possessed by these plants we may mention that we took a plant packed in a box with other specimens to America, and showed it at the Philadelphia Exhibition, where the Odontoglot lasted some time in full beauty. We also took many other Orchids in bud, and they flowered after their arrival, much to the astonishment of the American cultivators. Mr. R. Warner carried an Odontoglossum in full bloom to the St. Petersburgh Exhibition, and afterwards, while still in blossom, showed it in London. We mention these facts to show what may be done with these beautiful flowers.

Odontoglossum triumphans requires the same treatment as *O. Alexandræ* as regards temperature, material for potting, and moisture at the roots.

Disa grandiflora superba.—This grand Orchid is grown very successfully by Mr. Elphinstone, gardener to John Heywood, Esq., the Grange, Stretford, Manchester. We received from him a spike of it bearing seven flowers—a perfect marvel of cultivation. We should like to see this gorgeous plant better managed than it generally is, it being, when grown as Mr. Elphinstone grows it, without exception the most showy Orchid in cultivation.

VANDA ROXBURGHII.

VANDA ROXBURGHII.

[Plate 59.]

Native of India.

Epiphytal. *Stems* dwarf, stout, erect, leafy, with aërial roots from the lower portion. *Leaves* two-ranked, evergreen, leathery, light green, ligulate, channelled, obliquely tridentate at the apex. *Flowers* six to twelve, in erect axillary racemes longer than the leaves, tessellated; *sepals* and *petals* oblong-obovate, obtuse, undulated, white on the exterior surface, the inner side pale green, marked with olive-brown in chequered lines; *lip* three-lobed, projected backwards near the middle to form a short pinkish spur; the lateral lobes lanceolate, sharp-pointed, about as long as the column, white; the middle lobe convex, with the sides inflected beneath, ovate, emarginate and very obtuse, channelled, violet-purple, deeper towards the apex. *Column* short, thick, obtuse, white.

Vanda Roxburghii, *R. Brown*, in *Botanical Register*, t. 506; *Lindley, Genera and Species of Orchidaceous Plants*, 215; *Id. Folia Orchidacea*, art. Vanda, No. 4; *Id. Paxton's Flower Garden*, t. 42, fig. 2; *Hooker, Botanical Magazine*, t. 2245; *Van Houtte, Flore des Serres*, ii., t. 11; *Wight, Icones Plantarum Indiæ Orientalis*, iii., t. 916; *Williams, Orchid Grower's Manual*, 5. ed., 307.

Vanda tessellata, *Loddiges; Paxton's Magazine of Botany*, vii., 265 (var. with rosy lip).

Vanda tesselloides, *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 864.

Cymbidium tesselloides, *Roxburgh, Flora Indica*, iii., 463.

We now bring before our readers a plant that few of the present generation of Orchid growers have seen, but one which we think they all should possess, as it requires but little space, and produces its flower-spikes on very small specimens. Our plate will give some idea of this, as it represents a full-sized plant, with a spike of very charmingly coloured flowers. There are several varieties of this species known, among which we consider the one which our plate pourtrays to be an excellent form. The plant represented is in the collection of W. Lee, Esq., Downside, Leatherhead. We are delighted to know that Mr. Lee is taking up the cultivation of the Vandas (of which he possesses a splendid collection), and intends devoting a centre table in one of his houses to their accommodation. There are no Orchids that flower so freely when they are well grown; indeed, Mr. Lee blooms many plants of *Vanda tricolor* while quite small. When the specimens attain a large size they flower two or three times a year, lasting each time some six weeks, or even more, in perfection. They are extremely fragrant, imparting a

grateful odour to the whole atmosphere of the house. Other growers also are paying more regard to these beautiful plants, which we are glad to observe, as, though they flower so often, they do not require so much heat as some East Indian kinds.

Vanda Roxburghii is a dwarf compact growing plant, with light green foliage. The flower-spikes proceed from the axils of the leaves, and are upright, bearing from six to twelve flowers. The sepals and petals are of a greenish yellow, netted with purplish brown, the lip being of a bright mauve colour. This plant usually blossoms in May, and lasts six weeks in full beauty; but it sometimes varies as to the time of flowering.

The treatment which we find to suit this plant is to grow it in a basket suspended from the roof, where it procures a good amount of light, being merely shaded in summer when the sun is hot. It does best at the coolest end of the East Indian house. We have also cultivated it in a pot with good drainage and sphagnum moss; it requires a moderate supply of water in summer, but in winter only just sufficient should be given to moisten the moss.

Watering Orchids.—There can be no doubt that Orchids, like other plants, are particular as to the fluids given to them to nourish their roots. We often hear growers say, that the water obtainable in the particular locality where they may reside is hard, and that their plants do not thrive as they should do. We can fully sympathise with these men, as we know that hard water is bad for Orchids as well as for other plants. Hardwooded plants especially will not thrive if the water they receive does not suit them; but it must be borne in mind that these plants have fine hair-like roots, and are much sooner killed than Orchids which have thick fleshy roots. When conversing the other day with an Orchid grower from the north of England, who said that his plants were not doing well, that he could not keep the sphagnum moss alive—which he attributed to the use of hard water—and that he consequently put up a cistern for rain-water, and employed that, we were not surprised to hear that the result had been to improve the health of the plants, and that the moss was now growing luxuriantly.

There is a great difference between different hard waters; some contain a quantity of iron, while others contain lime; these when used for syringing leave white marks upon the foliage. We believe water containing chalk and lime to be beneficial to some kinds of Orchids, especially Cypripediums; in fact, some growers use chalk or broken limestone mixed with charcoal and peat to grow them in, and they succeed very well in it. We have frequently seen distinct traces of lime on imported Cypripediums. An importation of *Cypripedium Spicerianum*, received some time ago, was literally covered with lime deposit, probably owing to the plants having been found growing in the fissures of limestone rocks, where the water trickled down upon them. We should think that water containing iron would be the most injurious to Orchids.

LÆLIA PERRINII

LÆLIA PERRINII.

[Plate 60.]

Native of Brazil.

Epiphytal. *Pseudobulbs* (stems) club-shaped, under a foot in height, becoming furrowed when old. *Leaves* solitary, oblong-obtuse, about as long as the stems, coriaceous, of a dark green colour. *Spathes* oblong, compressed, green, often tinged with purple. *Scape* two-flowered, purplish. *Flowers* large, about six inches in expansion, richly coloured; *sepals* linear-oblong, bluntish, the lateral ones falcate, of a diluted magenta-rose; *petals* broader, oblong-lanceolate, of the same colour as the sepals; *lip* oblong-lanceolate, three-lobed, unguiculate, the base forming an inflated fistular cavity, the lateral lobes erect, acute, convergent over the column, the middle lip elongate, oblong-obtuse, wavy at the margin, the basal portion white inside, washed externally with magenta, the front part of an intense velvety purple-crimson. *Pollen-masses* eight.

Lælia Perrinii, *Lindley, Botanical Register*, 1842, under t. 62; *Paxton's Magazine of Botany*, xiii., 5; *Williams, Orchid Grower's Manual*, 5 ed., 207.

Cattleya Perrinii, *Lindley, Botanical Register*, 1838, t. 2; *Hastingen, Paradisus Vindobonensis*, i., t. 10.

Bletia Perrinii, *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*. vi., 421.

The *Lælia Perrinii* is a very old species, and one that nearly all Orchid growers have seen or had in their possession, but we do not consider it too ancient to be introduced to the notice of our subscribers. It is a useful acquisition to the Orchid house, as it flowers when there are few Lælias. or any other Orchids in bloom. There are several varieties of this *Lælia*, which vary in colour, some being much paler than others. The form we here illustrate is part of an importation we received a few years ago, many of which bore blossoms of the same colour as that here represented. A pure white variety also came from the same locality at the same time, but the latter is very rare, there being only a few plants in this country. The white-flowered forms seem to be making their appearance in many of the species of *Lælia* and *Cattleya*. We are glad to notice this, as they make a very pretty contrast with the dark-coloured flowers, of which we have so many in these two genera—genera which resemble each other very closely, the only tangible difference being in the number of pollen-masses.

Lælia Perrinii is an evergreen plant, with dark green foliage and pseudobulbs. the leaves being about a foot high, and the pseudobulbs ten inches. The flower-spikes proceed from the top of the bulbs, and issue from a sheathing bract; they appear after the plants have completed their growth. The sepals and petals are

of a light tint of magenta colour, while the lip is of a dark purple-crimson, with a rich yellow throat. The species blooms in October and November, and continues for about two weeks in perfection.

It requires the same treatment as *Cattleya Mossiæ*, and is best grown in a pot with good drainage and fibrous peat. It must be kept moist at the roots during the growing season, but after it has completed its growth less water will do, that is, merely enough to keep the roots and leaves in a plump state. When it recommences to grow a little water may be applied to encourage it to make strong growths, which are the precursors of finer flowers. The plants must be always fully exposed to light by being kept near the glass.

Orchids at Bickley.—A recent visit to Oldfield, the residence of F. A. Philbrick, Esq., Q.C., reminds us of the grand collection of Orchids in Avenue Road, Regent's Park, many of the best of which were sold on Mr. Philbrick changing his residence. It is surprising to find the rapid way in which a new collection is now being grown and brought together in the new place. Houses had to be built, and the plants removed from one garden to the other, which, of course, involves more or less of injury. It is now twelve months since we visited this place, and the change that has taken place in that interval in respect to the collection of Orchids is remarkable, and highly creditable to Mr. Heims, the gardener. The plants have real vigour about them, sending out their growths and making roots freely, which is a sure sign they are doing well. The Cattleya house is a well-built structure, having plenty of light, with provision for a good circulation of air, two things very essential to the successful cultivation of Orchids. Mr. Philbrick is doing the right thing in securing the very best species and varieties, for, as he remarked to us, "they take up no more room than the bad ones, which are dear at any price." We noticed some grand specimens of *Lælia purpurata* in bloom, with many spikes of flowers, and there were some wonderful varieties among them; also some large specimens of *Cattleya Mossiæ* in bloom. Of *Sobralia macrantha* there were large specimens which had been very fine; and of *Cattleya Mendelii* some fine varieties. Near to these stood several good Lælias, such as *L. elegans*, *L. anceps alba*, and *L. anceps Dawsoni*, which were growing vigorously. *Epidendrum vitellinum majus* was at the time finely in bloom.—B. S. W.

VANDA PARISHII MARRIOTTIANA.

VANDA PARISHII MARRIOTTIANA.

[Plate 61.]

Native of Moulmein.

Epiphytal. *Plant* dwarf, compact, evergreen, the *stem* short, with closely-set leaves, and thick aërial roots. *Leaves* distichous, ligulate-obtuse, with an unequal bilobed apex, stout and fleshy in texture, narrower, less drooping, and more densely set than in the type. *Scape* axillary, the spike erect, bearing several (about six) flowers. *Flowers* large, scentless, but remarkable for their beautiful colouring; *sepals* roundish-obovate, the outer surface pale mauve, with darker mauve blotches, and a well developed white keel, the inner surface bronzy-brown, richly suffused with magenta; *petals* similar in form and size, wholly mauve-coloured exteriorly, and within of the same brownish magenta tint as the sepals; *lip* auricled at the base, and produced into a short gibbous spur, the auricles white, with longitudinal mauve stripes, and two yellow blotches beneath the column, the anterior portion of the richest magenta or lake-carmine, rhomboid, gibbous below the apex, and having a keel along the median line, and a conical callus at the base. *Column* bent forward, white marked with purple.

Vanda Parishii Marriottiana, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xiii., 743; xv., 726.

Of this handsome novelty Professor Reichenbach observes, that it is "a very unexpected glorious surprise." We are indebted to the courtesy of H. J. Ross. Esq., Castagnolo, à Lastra, à Signa, Italy, for the opportunity of figuring it, he having been kind enough to send us a flower-spike, accompanied by a coloured sketch of the entire plant; we have since exchanged a few plants of it with him, and from these several materials our plate has been prepared.

Vanda Parishii Marriottiana was first flowered by Sir W. H. S. Marriott, Bart., in honour of whom it was named by Professor Reichenbach. It is totally distinct from the type, which was figured in the first volume of this work under Plate 15; and from which it will be seen that while in that the sepals and petals are distinctly spotted, they are in the variety before us of a bronzy brown, richly suffused with magenta, the lip being altogether of a rich magenta, as in the original form. This variety also differs from the type in having scentless flowers; and, moreover, the growth of the plant is altogether distinct, the leaves being more closely set on the short stem, as well as narrower, and less drooping.

A curious fact is mentioned by Professor Reichenbach, in his original description of this choice variety, namely, that, when fading, the blossoms take on an olive-green tint with dark blotches, thus in some degree reverting to the original colours.

Vanda Parishii Marriottiana requires the same treatment as other Vandas, and which has been already described under Plate 15.

Orchids in France.—The Chateau de Gouville is situated about twelve miles from Rouen, in a most picturesque part of Normandy, and is the country seat of the Comte de Germiny, a nobleman who is a most ardent admirer of Orchids, and spares no pains to extend his very fine collection, which is unequalled in France. The plant houses are situated near to the Chateau, and are well built of iron and stone, having circular roofs. On entering the first, which is filled with Caladiums and Gloxinias, one is at once struck with the beauty of these flowers; there is an endless variety of colour in the collection, and the size of the flowers is remarkable, larger than any we have previously met with. There is yet another house entirely filled with Gloxinias, which we had to pass through, when a large house is reached, where Stove Plants with ornamental foliage are planted out in the central portion, forming a handsome *parterre*, through which a stream of water flows. Above this natural undergrowth, the Vandas and Saccolabiums are suspended in baskets, and as a collection, are the finest we have ever seen. Among them we noted grand plants of *V. suavis*, of *V. tricolor* and its finest varieties, and of *V. cærulea*, some of them being several feet high, and in perfect health. We also noticed enormous masses of Saccolabiums growing on suspended blocks of wood, as imported. The plants evidently like this treatment, as they are rooting most profusely among the undergrowth, and the effect is indeed most charming. On the side stages are some grand plants of *Phalænopsis Schilleriana*, and of *P. amabilis*, as well as numerous Saccolabiums, Aërides, &c. We noticed a nice plant of the rare *Renanthera matutina* in bloom; this is a little gem, reminding one of a miniature *Renanthera coccinea*. At one end of this fine house, growing on rustic stands, is a fine collection of *Nepenthes*, forming together with the Orchids and other plants, as viewed from the entrance, a truly imposing tropical scene.

Leaving this house, we came to a compartment where are some grand plants of *Cœlogyne cristata*, with large masses of Pescatoreas, Bolleas, Dendrobes, &c., in vigorous health. The Cattleya house contains some wonderful examples of cultivation; we noticed particularly the following:—*Cattleya exoniensis* in bloom; two fine specimens of *C. labiata pallida* just past flower; *Lælia elegans alba*; *L. Perrinii*, fine specimens in bloom; *Cattleya gigas* just opening; and several grand plants of *C. Trianæ*, showing quantities of flower, as well as of *C. Mossiæ*, and *Lælia purpurata*.

In the Odontoglossum house are many fine plants of good varieties and of rare species, all doing well, and presenting a picture of health. Here we saw the true *Cypripedium Chantinii* flowering profusely, and *C. Spicerianum* with several spikes. A small house adjoining this is entirely devoted to *Phalænopsids*, the plants being suspended from the roof in baskets over tanks of water, which method of cultivation seems to agree well with them.

Altogether this is one of the finest collections of Orchids we have ever had the good fortune to see, the East Indian kinds being especially well cultivated. Great credit is due to M. Rondeau, the gardener, for the manner in which he manages his plants, and as M. le Comte remarked to us, for a gardener to grow his plants well, he must love them as he loves his children.—H. Williams.

J. Nugent Fitch del. et lith.

J. Nugent Fitch

MASDEVALLIA IGNEA.

MASDEVALLIA IGNEA.

[Plate 62.]

Native of New Grenada.

Epiphytal. *Stems* slender, erect, tufted. *Leaves* evergreen, coriaceous, six to eight inches long, the blade deep green, elliptic-oblong, blunt or notched at the apex, keeled behind, and narrowed below into a long slender channelled petiole, which is invested at the base by one or two membranous sheaths. *Scapes* slender, radical, ten to twelve inches long, invested at the base by sheaths, and having a sheathing bract beneath the blossom like those of the leaves. *Flowers* remarkable in form, and brilliant in colour, paler on the outer surface; *dorsal sepal* keeled, attenuate or subfiliform from a triangular base, bent down between the two lateral sepals so as to occupy the sinus, pale orange-red; *lateral sepals* connate below, elliptic-oblong, acute or apiculate, obliquely incurved, of a vivid cinnabar-red or glowing orange-scarlet, with three deeper red nerves; all united at the base into an incurved gibbous tube; *petals* white, small, included, ligulate, acute, hastately auricled at the base in front; *lip* white, small, enclosed, unguiculate, linguiform, subcordate at the base, crenulate in front. *Column* erect, wingless.

Masdevallia ignea, *Reichenbach fil.*, in *Gardeners' Chronicle*, 1871, 1482; *Hooker fil.*, *Botanical Magazine*, t. 5962; *Moore*, *Florist and Pomologist*, 1873, 169, with coloured plate; *André*, *Illustration Horticole*, t. 333; *Gardeners' Chronicle*, 1872, 545,. fig. 149; *Floral Magazine*, 2 ser., t. 15.

This is a most distinct species of *Masdevallia*, and one that should be welcomed wherever richly coloured flowers are required, whether it be for exhibition purposes, or as a distinct companion to the other fine members of this genus. For the supply of cut flowers it will be found invaluable, on account of its distinct glowing colour. There are a great many varieties among the species of this genus—some of which are infinitely superior to the one here figured, and the most select and distinct of which we hope to be able to illustrate at a future time. We find upon reference to those publications wherein the various Masdevallias have been figured, that the several artists have done but scant justice to their remarkable beauty, owing, we suppose, to the frequent want of the pigments necessary to represent truthfully their rich colouring and markings. We refer here more particularly to that section of the genus represented by *M. Harryana*. Since the publication of some of these plates, however, the chemist has had the good fortune to discover the two lovely colours, magenta and mauve, by the aid of which we are now enabled to pourtray more accurately than before these wonderful productions of nature, the Orchids, in which the two colours referred to largely preponderate.

Masdevallia ignea is a dwarf growing evergreen species, producing its flowers singly on erect growing peduncles during the summer months, and lasting for some weeks in perfection. It was introduced from New Grenada in 1870. Our plate was taken from a well-grown plant flowered in the fine collection of C. Dorman, Esq., The Firs, Lawrie Park, Sydenham, under the care of Mr. Coningsby.

The Masdevallias require a copious supply of water all the year round, but more particularly when they are making young growths; abundance of air and efficient shade, with a temperature varying from 45° to 50°, are also necessary to their free development. The treatment is more fully explained under Plate 24.

These plants are subject to the attacks both of the thrips and the green fly, which should be vigorously pursued and destroyed. Should they become numerous, the plants should be carefully fumigated, say two or three times a week, until the pests are annihilated. When the smoke is applied, care should be taken to have the plants dry, and to remove those which are in bud or in flower. Propagation is effected by division just before the plants begin to grow.

Edinburgh International Horticultural Exhibition, *September*, 1882.—There were many Orchids at this Show, which, we think, our readers will be pleased to see noticed, especially as it was late in the season for Orchids to be in bloom. There were many fine specimen plants shown in the various classes. A. Paul, Esq., exhibited a fine plant of *Cattleya Harrisonii*, with thirteen spikes of its delicate-coloured blossoms; also the lovely and rare *Lælia Turnerii*, with its rich-coloured flowers, eight on each spike; and a fine specimen of *Saccolabium*, quite distinct in character, with a very large and long spike of flowers; the same plant last year produced four spikes, each nearly two feet in length, and is itself eighteen inches in height, and two feet across; the showy *Odontoglossum grande* was very finely shown, also *Vanda suavis*. W. McDonald, Esq., of Perth, had some fine plants; we noticed a well-cultivated *Cattleya crispa superba*, with fine spikes of flowers; also, *Odontoglossum grande*, with seven spikes of bloom; this is one of the most showy and best of Orchids at this time of the year. The same grower also exhibited a good specimen of *O. Pescatorei*, and the rare *Cattleya exoniensis*, which was in fine colour. From C. Walker, Esq., of Brettagh Holt, came some fine plants of *Odontoglossum grande*. The most extraordinary specimen was *Renanthera coccinea*, which was exhibited by Mrs. Tait, Milrig, Galston; it stood five feet in height, with four of its richly-coloured spikes of blossom, one of which bore about one hundred expanded flowers; it was a most gorgeous sight, especially as it bloomed in such a small state, for the plant, as a rule, makes a long growth before it commences flowering. Dr. Paterson, of the Bridge of Allan, exhibited a most charming variety of *Cattleya Dowiana*; and J. Douglas, Esq., of Dalkeith, showed a fine form of *Cattleya gigas*. Our limited space will not permit us to say more. —B. S. W.

J. Nugent Fitch del. et lith.

COELOGYNE PANDURATA.

CŒLOGYNE PANDURATA.

[Plate 63.]

Native of Borneo.

Epiphytal, *Pseudobulbs* large, somewhat compressed, oblong ovate, bearing about two leaves at the summit. *Leaves* large, broadly-lanceolate, plaited, eighteen inches long, many-nerved. *Scape* radical, produced with the young growth, supporting a pendulous raceme somewhat longer than the leaves. *Flowers* numerous, rather distant, large, four inches across when fully expanded, fragrant, each one issuing from the axil of a brown cucullate deciduous bract as long as the pedicel; *sepals* and *petals* linear-oblong, acute, pale green; *lip* concave at the base, cordate-oblong, appearing to be panduriform from the inflection at the sides, retuse, setaceo-acuminate, the edges crisped, green marked with blackish veins and stains, the disk with three keels and two deep double-warted crests on each side, the crests converging towards the middle of the lip, where they are lost amongst a series of irregular rugged often two-lobed warts. *Column* green, with the edges thin and rounded.

Cœlogyne pandurata. *Lindley, Gardeners' Chronicle*, 1853, 791; *Id. Folia Orchidacea*, art. Cœlogyne, No. 7; *Hooker, Botanical Magazine*, t. 5084; *Bateman, Second Century of Orchidaceous Plants*, t. 160; *Van Houtte, Flore des Serres*, t. 2139; *Reichenbach fil., Xenia Orchidacea*, t. 121; *Id. Walpers' Annales Botanices Systematicæ*, vi., 224.

As a curiously beautiful plant this Orchid is perhaps unequalled. It is very rarely met with in a flowering state in collections, which is the more to be wondered at, as though the flowers are not bright in colour, yet on account of the peculiar association of tints—light green and black—and their large size, it makes a very attractive object. The flowers are produced upon drooping spikes from the young growths during the summer, and continue for some time in perfection.

Cœlogyne pandurata is a native of Borneo, where, according to Mr. Low, it is common on trees, in shady places overhanging water. It thrives best in the temperature of the Cattleya house, and during the period of growth requires a good supply of water. After the growth is complete, less water must be given, until it begins again to show signs of starting into fresh growth, when the supply should be gradually augmented.

The specimen here figured was flowered in the fine collection of Baron J. H. Schroeder, The Dell, Staines, under the care of Mr. Ballantyne, the gardener, who seems to be very successful in the cultivation of this interesting plant.

The root material in which we find it to succeed best, is a compost of peat, with a little moss and charcoal added. It does well either in a pot or in a basket, suspended from the roof, but should be well shaded from the sun, as too much

sunlight causes the leaves to become spotted and look sickly, and this is very detrimental to the plants. It will be found to be a very free-growing species, when it obtains the treatment it requires.

The plant is propagated by separating the pseudobulbs just before they start into growth.

Orchids in France.—The Chateau de Ferrières, the country seat of Baron Alphonse de Rothschild, in the department of Seine et Marne, is situated about 33 kilometres from Paris, and about two miles from the station Ozouer la Ferrière, on the Ligne de Mulhouse. Orchid growers, when in Paris, would do well to pay this wonderful place a visit, since it is unequalled both for size and beauty by any other place in France. Here Orchids are well cared for, Mr. Bergman, the gardener, being very successful in their cultivation, admirably seconded as he is by his son, who passed some years in this country, studying gardening in all its branches.

Commencing with the Vanda house we were pleased to find these noble plants so much at home, there being several remarkable specimens of *V. suavis*, *V. tricolor*, and *V. tricolor insignis*, marvels of cultivation. *Vanda cærulea* is doing well and flowering profusely. *V. Lowei* is represented by a plant of enormous dimensions, having four strong growths, and is one of the finest plants we have ever seen. The species of *Phalænopsis* are also well grown here, in company with the Vandas, and right well do they seem to like their company, since there are some wonderful plants of nearly all the species, thriving well and making strong flowering spikes. In the Cattleya house are some fine healthy plants of all the best species and varieties thriving admirably. Mr. Bergman gives his plants plenty of light, which causes them to look somewhat yellow, but he gets his bulbs ripened off well, and flowers them in greater profusion. Passing from here to the new Odontoglossum house we find a grand collection of these favourite Orchids. These plants are grown very largely here, as cut Orchids are in great request.

In another house are some other fine Vandas, associated with ornamental Stove Plants. Doing well in the same house, near the door, are a quantity of plants of *Vanda teres*, planted out in a compost of moss and charcoal, which is kept together on the stage of the house by a wirework edging. Here the plants are allowed to grow freely until they touch the glass, when they are cut down and replanted. All the light possible is given them, together with a copious supply of water, and the plants flower luxuriantly every year. Mr. Bergman, Jun., informed us that last year 651 flowers were cut from these plants. We recommend cultivators to give this plant a trial in the way above described, as it is one of the richest gems of the Orchid world. *Cœlogyne Massangeana* was doing well; one plant, having ten spikes, was suspended from the roof, and was an object never to be forgotten.

H. Williams.

J.N. Agent Fitch del et lith.

ODONTOGLOSSUM ROEZLII.

ODONTOGLOSSUM ROEZLII.

[Plate 64.]

Native of Colombia.

Epiphytal. *Pseudobulbs* narrowly-ovate, two inches long, compressed, with acute margins. *Leaves* elongately linear-lanceolate, acuminate, nearly or quite a foot in length, keeled behind, and there marked with nine nervose striæ, the colour a clear pale green. *Scapes* short, slender, terete, three to six-flowered (according to Rchb.), erect, with subulate pale green bracts shorter than the pedicels, which pass gradually into the slender grooved ovary. *Flowers* three to four inches across, flat, exceedingly chaste and effective; *sepals* obovate-oblong acute, sub-equal, snow-white; *petals* similar to the lateral sepals in form, but rather broader, pure white, marked with a distinct transverse purplish-red band at their base; *lip* large, two and a half inches across, broadly obcordate, or cuneately flabellate, obtusely bilobed, with a mucro in the sinus, sagittate or bearing a spur-like horn directed upwards and backwards on each side at the base of the short claw, and having three short slender keels on the disk in front of the horns, and a pair of short calli interposed; the disk has a largish yellow blotch streaked with red, while the rest of the surface is snow-white. *Column* short, wingless.

Odontoglossum Roezlii, *Reichenbach fil.*, in *Gardeners' Chronicle*, 1873, 1302, fig. 269; *Id. Xenia Orchidacea*, t. 182, fig. 1; *Hooker fil.*, *Botanical Magazine*, t. 6085; *Bateman, Monograph of Odontoglossum*, t. 30; *Floral Magazine*, ser. 2, t. 90.

This grand Odontoglot, which has been designated "a first-class beauty," and which comes near to *Odontoglossum vexillarium*, was introduced in 1873 by Mr. B. Roezl, the very successful traveller and Orchid hunter, who has so well worked up the greater part of the Western hemisphere in the search after these plants, and to whose zeal and energy Orchid growers are so deeply indebted for the many rich gems he has introduced to cultivation. The species was most properly named by Professor Reichenbach after Mr. Roezl, and we are glad to be able to figure it, in order to remind Orchid growers how much they owe to the unflinching perseverance of one who has now retired from active life among his favourites. The best compost in which to cultivate this plant, is a mixture of peat and moss, with good drainage.

Odontoglossum Roezlii is one of the few Odontoglots that require to be grown in a warm temperature. The Cattleya house will be found to be the best position for it, and if the plants are suspended either in pots or in baskets from the roof of the house, where a copious supply of water can be given to them, they will be found to thrive well. This species is particularly liable to the attacks of the thrips, and great care should be exercised in searching for and destroying them. We have found flowers of sulphur mixed with water, and applied to the young growths with a

camel's-hair pencil, very beneficial in preventing the attacks of this insect, while the application does not at all injure the young and tender parts. The thrips has a great aversion to sulphur—in fact will not go near it.

The drawing from which our plate is prepared was taken from the select collection of D. Tod, Esq., Eastwood Park, Thorliebank, near Glasgow, who is not only forming a nice collection of Orchids, but who flowers this species very freely, and cultivates it better than we have seen it grown in any other collection. We have had these plants under our notice for the past three years, and believe Mr. Tod's gardener has hit upon the right method of treatment, the plants being very strong and vigorous, with clean healthy foliage. The specimens at Eastwood Park are grown in a warm house, near the glass, with plenty of moisture during the summer season, and even in winter they are kept moist at the roots.

Orchids at Bickley.—We are glad to see the East Indian Orchids well represented in the new collection being got together by F. A. Philbrick, Esq., Q.C., at Bickley. They are grown in a house where they are associated with stove plants. Here are seen some fine examples of *Vanda*, *Saccolabium guttatum* in bloom, also a wonderful specimen of *Aërides affine*, with many spikes just coming into flower. We, moreover, noticed some fine plants of *Cypripedium* in bloom in the same house. The cool house is well filled with fine examples of *Odontoglossum* and *Masdevallia*, which are promising to make fine plants. Many kinds of *Masdevallia* were in bloom when we saw them, amongst them an especially fine dark variety of *M. ignea* in full beauty, and some varieties of *M. Harryana* were very bright in colour. *Odontoglossum Alexandræ* was well represented by several varieties in bloom. A cool and airy house is set apart for *Dendrobiums*, and alongside this is a house devoted entirely to *Phalænopsis* containing a fine lot of healthy plants, all hanging in baskets near the light, but shaded from the sun, which bid fair to eclipse their predecessors in this collection.—B. S. W.

Cattleya superba.—We have received a very fine spike of blossom of this splendid *Cattleya* from the choice collection of O. Schneider, Esq., Cromwell Grange, Fallowfield, near Manchester. The inflorescence was cut from a remarkably well-grown specimen, and bore six flowers. We have never seen better managed plants of this species than are to be found at this place; they do great credit to Mr. Holmes.—B. S. W.

Cattleya virginalis.—A fine variety of this chaste Orchid comes to us from R. P. Percival, Esq., Birkdale, Southport. The sepals and petals are pure white, and the lip white, with an orange spot at the entrance to the throat. This species is very strongly scented.—B. S. W.

Comparettia Macroplectron.

COMPARETTIA MACROPLECTRON.

[Plate 65.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* small, oblong, truncate, compressed or flattish, with the angles rounded, of a pinkish colour, monophyllous or sometimes a second leaf sheathing the bulb. *Leaves* oblong ligulate, acute, keeled, bright green, shining. *Peduncles* slender, drooping, lateral, sheathed at the base by ovate-lanceolate bracts, and bearing a secund raceme of flowers having minute scale-like bracts at the base of their inch-long pedicels. *Flowers* large, of a delicate rose colour, prettily spotted; *dorsal sepal* ligulate acute, umbonate at the back near the base; *lateral sepals* ligulate acute, fornicate, connate into a slender pointed spur two inches in length, all blush-white, thickly spotted with purple; *petals* cuneate-ovate acute, purplish rose, covered with deep rosy purple dots; *lip* with a pair of blunt-angled auricles at the base, and a linear keel-shaped claw, the anterior lobe subquadrate, an inch and a half broad, emarginate with an apiculus, of a pleasing delicate tint of soft magenta-rose, deeper near the claw, where it is marked by a few purple spots, the sides crenate or repand, the two included spurs of the lip elongate, and finely papulose, orange coloured in the inferior half. *Column* free, erect, with a perpendicular ridge in the middle of the stigmatic hollow.

Comparettia macroplectron, *Reichenbach fil. et Triana*, in *Gardeners' Chronicle*, N.S., x., 524; *Id.* xi. 398.

The Comparettias form a small genus of very dwarf-growing Orchids, some of the species of which are, not only very beautiful, but also free blooming. That which we now illustrate is a most charming plant. The original, from which the drawing was made, was sent to us by F. A. Philbrick, Esq., Q.C., of Oldfield, Bickley, and was a well-grown specimen, which did great credit to Mr. Heims, the gardener. Generally these plants have not been well managed, but latterly they appear to have been better looked after, and we have received, from Sir Trevor Lawrence, Bart., M.P., and others, specimens of other desirable kinds, which we hope to illustrate in due course. We are glad to find that our collectors are turning their attention to the importation of the Comparettias, as there are some lovely species among them Moreover, they require but little space to grow them in, and they are always charming when in blossom.

Comparettia macroplectron is an evergreen and very floriferous plant, with small peculiarly-shaped pseudobulbs, and short bright green glossy leaves. The flower-spikes are produced from the base of the pseudobulbs, and bear five or sometimes more flowers in a drooping raceme. The sepals and petals are rose colour, the former paler than the latter, and both are spotted with a deeper tint of rose-purple; the

lip is also of a beautiful delicate rose colour, which becomes deeper and purple-spotted near the base. The flowers are produced in July and August, and continue in perfection for some time.

This plant will thrive either in a basket or pan suspended from the roof, where it can receive a great amount of light, and in order to grow it successfully this plan should be followed. The species, which are all small growing subjects, are found on the branches of trees where they obtain just sufficient shade to screen them from the burning sun, and where they also get heavy dews at night, and sometimes a great amount of rain. It is during this rainy period that they make their growth and produce their flower spikes. Both the foliage and bulbs being small, they require careful attention as regards moisture at the roots.

We find the most suitable material in which to grow them, is a little fibrous peat and sphagnum moss with good drainage, so that the water may pass away without becoming stagnant. Some portion of this material should be changed each year, just as the plant begins to show signs of making its growth.

The Comparettias will not submit to be divided or cut; and we find the Cattleya house the most suitable structure to grow them in. They are subject to the attacks of white scale, and if these are allowed to accumulate, the plants will soon show signs of bad health, but if sufficient care is bestowed to keep them clean they will well repay the trouble which is taken, and afford great pleasure not only to those who are fond of Orchids, but also to those who take an interest in watching these floral treasures as they put out their new growths and beautiful flowers.

Orchids at Brentham Park, Stirling.—A visit to this place, the residence of R. Smith, Esq., is at all times a great treat, since it commands a grand view of the country around, surrounded by the distant mountains. Our chief source of attraction, of course, was the Orchids, of which there is here the largest and richest collection in Scotland. There are many fine plants of Cattleya, such as *C. exoniensis*, the best variety, which, when in bloom, must present a most gorgeous sight. *C. amethystoglossa* is also a fine specimen, and is the same beautifully spotted variety which was figured in Warner's *Select Orchidaceous Plants*. *Cœlogyne Massangeana* is a wonderful example of good cultivation, with its pendulous spikes overhanging the pot. So is *Zygopetalum Gautieri*, with many spikes of its charming mauve-coloured flowers; and *Odontoglossum Andersonianum*, with fine branching spikes, which must be very beautiful when in bloom. Associated with this was a very fine *O. Alexandræ*, quite one of the best spotted varieties we have seen, which Mr. Smith kindly sent for our artist to copy.

There are many fine Odontoglots here, which are showing well for bloom. Since our visit last year there has been a new house erected for the Cattleyas, of which there is a good and well-grown collection. Mr. Smith is always looking out for the best varieties that can be procured.—B. S. W.

J Nugent Fitch del.et lith.

ODONTOGLOSSUM CRISTATELLUM.

ODONTOGLOSSUM CRISTATELLUM.

[Plate 66.]

Native of the United States of Columbia.

Epiphytal. *Pseudobulbs* ovate, one and a half to two inches long, pale green. *Leaves* one or two from each pseudobulb, ligulate-oblong, acute, narrowed to the base, keeled. *Peduncles* radical, terminating in a showy raceme of flowers, and furnished below with lanceolate pale brown bracts, smaller triangular bracts being produced at the base of the pedicels. *Flowers* two and a half inches across, attractive in colour and marking; *sepals* and *petals* subhastate, broadish oblong-ovate above, acuminate, yellow, with a few large rich chestnut-brown blotches; *lip* short, narrow, the blade oblong-panduriform, apiculate, the margin much undulated and minutely denticulate, yellow at the base and chestnut-brown in front, bearing at the base of the disk subulate radiate calli, consisting of about six teeth on each side, and in front of these two rhomboid serrated lamellæ, all these parts yellowish, streaked (and the keels bordered) with chestnut-red. *Column* trigonous, arcuate, with violet spots in front of its base, and chestnut-red wings.

Odontoglossum cristatellum, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., x., 716; *Id.* xvii., 143.

Odontoglossum Lehmanni, *F. C. Lehmann in litteris*—fide Reichenbach.

The *Odontoglossum cristatellum* is described by Prof. Reichenbach as a near relative of *O. cristatum*. It is, without doubt, a very rare plant, one that has flowered in but few collections, and is supposed to be a natural hybrid. It is not perhaps so showy as some other Odontoglots, but still it is one that is quite worth cultivating. Our sketch was taken from a well-grown plant in the collection of O. Schneider, Esq., Cromwell Range, Fallowfield, Manchester. This gentleman, who has an excellent collection of Orchids, has houses set apart for the various kinds, and we may say that our visit there gave us very great satisfaction, as we there saw many well-grown plants of species that are usually found difficult to cultivate.

Odontoglossum cristatellum is a compact evergreen plant, growing from ten inches to a foot in height. It is furnished with light green foliage and produces its flower-spikes at different periods of the year, according to the time of the completion of its growth; moreover, it lasts for several weeks in bloom. The plant requires to be grown in the cool Odontoglossum house, with the same treatment as *O. Alexandræ*, as regards soil, water, and temperature, fire-heat being always avoided if possible in summer. The less fire-heat the plants receive the more successful will be their growth, though, of course, in cold weather, some little fire

will be required to keep the house up to the correct temperature, at the same time giving a little air, but avoiding cold draughts.

The Odontoglots are among the most accommodating of Orchids, as they are free-growing, and most of them free-blooming subjects. By having a stock of plants, a succession of flowers may be kept up all the year round in the case of such kinds as *Odontoglossum Alexandræ*, *O. Pescatorei*, and others. There are some amateurs who are not satisfied unless they possess some thousands of plants of the two species just named, and they argue correctly, that by obtaining so many they have the opportunity of selecting the good kinds for permanent cultivation, and of doing away with the bad ones, or else of using them for ordinary decorative purposes. The good varieties take up no more room than the indifferent ones, and both are valuable and beautiful in their respective departments.

Orchids at The Kilns, Falkirk, N.B., the seat of John Gair, Esq.—A short time since we paid a visit to this place, and we were well repaid for our journey. We always maintain that there is something to be learnt in every place, and we found it so here. Thus we often hear it remarked that Orchids and stove plants cannot be grown together, but we found in this collection that many stove plants were grown in the centre bed, while Orchids were suspended from the roof, the side tables also being full of Orchids. In this case the house was a large span-roofed one, and contained many kinds of Orchids, coming from countries various and diverse. The plants, consisting of many hundreds, were all grown together, and there was not one in bad condition among them. We propose to mention the different genera which have been cultivated in this house for several successive years, since we have been fortunate enough to be able to bear testimony to the progress they have made. On entering the house one's attention is at once arrested by some finely grown specimens of *Bollea*, *Huntleya*, and *Batemannia*, all in luxuriant health. Next came *Lælia purpurata*, *L. elegans*, *L. elegans prasiata*, and others, all in the best possible condition, and flowering freely. There was also standing on the same table a well-grown collection of *Cypripediums*, consisting of all the choicest and best kinds, which were growing splendidly. Mr. Fairbairn appears to use a great deal of water, more than we do, for we were informed by him that he syringed them every day in summer, and kept them moist in winter, though at that season he does not syringe them so much. By the side of these were many fine plants of *Dendrobiums*, and other good Orchids. At the end, and on the other side of the house, there was a good collection of East Indian Orchids—*Aërides*, *Saccolabiums*, *Angræcums*, *Vandas*, &c., all doing well. Then came a fine lot of *Cattleyas*, such as *C. Trianæ*, *C. Mendelii*, *C. gigas*, *C. Warnerii*, *C. Mossiæ*, and others, all in excellent health. The centre table was furnished with many fine Orchids mixed with foliage plants, and from the roof were suspended such genera as *Phalænopsis* and *Dendrobium*, making fine growths, and enjoying the moisture from the stove plants below.—B. S. W.

PHUNIA BENSONIÆ.

THUNIA BENSONIÆ.

[Plate 67.]

Native of India—Rangoon.

Terrestrial. *Stems* deciduous, terete, one and a half to two feet high, swelling into tuberous knobs at the base, the lower part clothed with suborbicular green reflexed leafy sheaths, which, as they advance upwards, gradually pass into the leaves. *Leaves* sheathing, membranous, subdistichous, linear-lanceolate acuminate, glaucous beneath, six to eight or ten inches long. *Flowers* large and very showy, terminal, growing in short nodding racemes of ten to fifteen together, each emerging from a pale green sheathing bract, which encloses it while in bud; *sepals* and *petals* linear-lanceolate, partially spreading, two to three inches long, of a light magenta-purple striately distributed, and paler towards the centre; *lip* about three inches long, three-lobed, the lateral lobes short, obtuse, rolled round the column, toothed; middle lobe broadly oblong, flabellate, closely undulated and lobulate, of a very rich deep magenta-purple, the base produced into a short notched spur, the disk of a rich bronzy orange, bearing several ciliated keels. *Column* furnished with toothed wings at its apex.

Thunia Bensoniæ, *Hooker fil.*, *Botanical Magazine*, t. 5694; *Williams*, *Orchid Grower's Manual*, 5 ed., 298.

Phaius Bensoniæ, *Hemsley*, in *Gardeners' Chronicle*, n.s., xviii., 565.

This is undoubtedly one of the most beautiful and free-flowering of the Thunias. The colour of its gorgeous flowers is very uncommon in the Orchid family, and is very charming. It is a plant that should find a place in every collection, especially when seen in such a form as that represented in our drawing, taken from a plant to which we alluded when referring to the Orchids in bloom in the collection of W. Leach, Esq., Oakleigh, Fallowfield, Manchester—a collection very ably managed by Mr. Swan. The Orchid houses at Oakleigh are well arranged, so that the different temperatures required by plants coming from different localities are readily obtainable, and the plants being grown near the glass they have plenty of light. This is a great advantage to Orchids generally, as by this means the growths get better ripened, and this enables the plants to flower more freely, and to produce flowers of a richer colour.

Thunia Bensoniæ is a deciduous plant, losing its stems and foliage after it has finished its growth. It attains to a height of from eighteen inches to two feet, or sometimes more when the growths are strong. We have seen blooming plants eighteen inches in height. The flowers proceed from the top of the new stems at the time they are making their growth, and they continue blooming for some

time. The sepals and petals are of a pale magenta colour, while the lip is much darker, of a rich purple, with a bronzy orange blotch. Sometimes the spikes produce as many as fifteen of these beautiful blossoms, which was the case with the plant from which our illustration was taken; they do not, however, all open at the same time, but follow in succession until the spike is exhausted.

The Thunias are all deciduous plants, and require different treatment from that given to evergreen Orchids. After their growth is completed, they require a season of rest, which must be given by putting them away in a dry part of the house. It is after they have finished their growth that their foliage begins to decay, and subsequently falls away. When in this dormant state they require just sufficient moisture to keep them from shrivelling. This treatment must be continued until March, when they will begin to show signs of growth; at that time they must be shaken out of the pots, the decayed roots cut off, and the plants re-potted, setting the bulbs one inch below the pot rim, and just into the soil, so that the young growths are not covered. We find rough fibrous peat and sphagnum moss suitable material for growing them in, and good drainage is indispensable, as the plants require a considerable amount of water when they are in a vigorous state, as their growth and flowering are both completed in about six months. Water should be sparingly applied until the stems are a few inches high, just sufficient being given to keep them moist until the roots are beginning to fill the pots; then a little manure water will benefit them, making them grow stronger and flower more freely.

They are of easy cultivation, and do not require deep pots, indeed pans from three to four inches deep will suit them, and they may be suspended from the roof, where they can get plenty of light. They will, however, thrive on tables if they receive all the light possible, and are shaded from the sun. We have also grown them on blocks, but grown in this way they require more frequent and copious supplies of water.

Thunias are readily propagated by taking off some of the old bulbs when the young growths are about ten inches in height, but only part of the old bulb should be removed or cut off, dividing it in pieces of about six inches in length, and placing these in sand. The growths proceed from the joints, and these make plants during the season; they must be potted in due course, and often bloom during their second year.

Odontoglossum coronarium miniatum.—We received in August last from the garden of Lord Rendlesham, M.P., Woodbridge, Suffolk, a fine inflorescence of this rare Odontoglot, which is seldom seen in flower. The spike bore twelve of its gay-looking yellow and brown flowers. In growth it resembles *O. coronarium*, only it is much smaller; the flowers also resemble those of that species, but they are, like the growth, considerably smaller. Many growers believe this to be the same as *O. brevifolium*, but the two plants are quite distinct, both in flower and in growth, besides which *O. brevifolium* is much the freer flowerer of the two.—B. S. W.

J.Nugent Fitch del.et lith

ODONTOGLOSSUM PESCATOREI VEITCHIANUM.

ODONTOGLOSSUM PESCATOREI VEITCHIANUM.

[Plate 68.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* roundish or bluntly ovate, slightly-ribbed, about an inch high, diphyllous. *Leaves* strap-shaped or lorate-oblong, narrowed both to the base and apex, six inches long, of a deep green colour. *Peduncle* springing from the base of the pseudobulb, a foot in height in the only specimen which has yet flowered, bearing a raceme of about half-a-dozen flowers rather closely placed back to back at its upper end, with minute bracts at the base of their pedicels. *Flowers* two and a half inches across, the most beautiful which have yet appeared amongst the forms of this species; *sepals* oblong acute, over an inch in length, pure white, marked with two or three transverse curved bars of the richest crimson-purple or wine-purple; *petals* broadly ovate apiculate, slightly wavy, white, more irregularly transversely blotched than the sepals with the same rich purple colour; *lip* undulated at the edge, heart-shaped at the base, contracted in the middle, dilated and cuspidate at the apex, white with a few purple spots round the basal lobes, the disk including the contracted parts bright yellow, furnished on each side with a flat lacerated appendage streaked with red, having a pair of parallel plates between, and bearing a few deep red spots. *Column* with short lacerated wings.

Odontoglossum Pescatorei Veitchianum, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xvii., 588; *Moore, Florist and Pomologist*, 1882, 76.

There is no doubt that *Odontoglossum Pescatorei* is one of the most beautiful species of this extensive and exceedingly beautiful genus of Orchids. Its flowers borne in fine branching panicles, are most pleasing in their form and character, and of a chaste and lovely whiteness, besides which the plant is one of the most free-growing of the Odontoglots. There are in our collections many forms of this species, and most of them are well worthy of cultivation, the flowers being for the most part good in shape and of a pure white, which is a colour generally sought after by those who have a keen taste for floral beauty. A hundred of these gems can be cultivated in a small space, and they can now be purchased at so cheap a rate that they are within reach of everyone who can afford to erect a small house: and being really cool Orchids they require but little fire heat at any time, and none whatever during the summer months.

The variety, *Veitchianum*, which we now introduce to our readers, bears most charmingly and wonderfully spotted flowers, as will be seen from the accompanying plate. It bloomed last spring for the first time in the fine collection of Orchids belonging to Messrs. J. Veitch & Sons, of Chelsea, who imported it with many thousands of plants referrible to this specific type, and amongst them many

hundreds of good kinds have been flowered, but none approaching in richness of hue or in beauty of marking, to the one now before us. We hope the Messrs. Veitch may be fortunate enough to bloom more of the same, as cultivators will be glad to procure it for their collections. The plant in question has, we understand, now passed out of their hands into Baron J. H. Schroeder's collection at Staines.

Odontoglossum Pescatorei Veitchianum has the same habit of growth as the type. The flowers on the specimen which bloomed last year, and was certificated both by the Royal Horticultural and Royal Botanic Societies, formed a close raceme, and were large and showy, the sepals and petals being white, heavily transversely blotched at the base with a lovely shade of crimson-purple, the lip being also white, and spotted around the base with the same colour, while the bright yellow disk was striately marked with crimson. This specimen bore several flowers on the spike, and we have no doubt that as the plant increases in strength the spikes will branch into panicles, as those of most of the plants of *O. Pescatorei* are branching in habit. They are graceful in appearance, and of long duration, which renders them most useful for decorative purposes, the more so as even when cut and placed in water they keep fresh for a long time. The treatment these plants require is the same as that of *O. Alexandræ* and the other cool-house Orchids.

The greatest pest in the cultivation of cool Orchids, and one which is consequently a great annoyance to cultivators, is a small black slug that takes up its home in the moss and about the plants, and which often eats many of the young flower spikes when they first appear. These should be sought after night and morning as it is at these periods they do their mischief. They seem to enjoy the temperature of the cool Orchid house. The method we adopt for catching them is to look the moss carefully over at once, when the spikes first appear, and be sure there are no slugs allowed to remain among it; then we place a wire round the pot, and suspend it from the roof, and in this manner we secure the flower spikes. This is done when they are young, which is the favourite time for these marauders to attack them. The plants are well worth this trouble, as after watching them for a length of time it is most annoying to find the flowers destroyed.

Odontoglossum Alexandræ.—We have received from H. J. Buchan, Esq., Wilton House, Southampton, a grand spike of a fine variety of this most variable Orchid. The flowers are large, and of fine form and substance; the sepals and petals are pure white, beautifully serrated; the lip is broad and distinctly coloured on the upper part. This is one of the best forms of *O. Alexandræ* we have met with. Mr. Buchan has a good collection of cool Orchids, and has been growing them for many years.—B. S. W.

Odontoglossum Jenningsianum.—R. Smith, Esq., Brentham Park, Stirling, has sent us a splendid inflorescence of this novelty. The flowers are produced in a panicle, which is much branched, and bears numerous blossoms. This species somewhat resembles a spotted form of *O. Alexandræ* in the markings of the flowers, but the form is more like that of *O. Andersonianum*.—B. S. W.

CATTLEYA ACLANDIÆ

CATTLEYA ACLANDIÆ.

[Plate 69.]

Native of Bahia.

Epiphytal. *Stems* (pseudobulbs) clavate, slightly furrowed, jointed, four to five inches long, sheathed at the joints with membranaceous spathes. *Leaves* terminal, two in number, elliptic, obtuse, thick and fleshy in texture, dark green. *Scape* terminal, bearing about two flowers and issuing from between the leaves. *Flowers* large, about three inches across, and strikingly beautiful from the boldly contrasted colours; *sepals* and *petals* nearly equal, somewhat fleshy, obovate-lanceolate, yellowish green heavily and tranversely blotched and spotted with rich dark chocolate-purple, the markings more distinctly coloured on the inner surface, but apparent though less distinct on the back or exterior surface; *lip* large, fully two inches long, flat, panduriform, three-lobed, the lateral lobes pale rose marked with transverse veins, small and not enclosing the column, the front lobe one and a half inch across, broadly kidney-shaped, emarginate, of a bright magenta colour, the disk marked by a yellow line. *Column* dark magenta, parallel with the lip, obovate, with two wing-like margins.

Cattleya Aclandiæ, *Lindley, Botanical Register*, 1840, t. 48; *Paxton's Magazine of Botany* ix, 1; *Flore des Serres*, t. 674; *Illustration Horticole*, t. 565; *Hooker, Botanical Magazine*, t. 5039; *Bateman, Second Century of Orchidaceous Plants*, t. 119; *Williams, Orchid Grower's Manual*, 5 ed., 114.

The *Cattleya Aclandiæ* though a small-growing epiphyte, is one of the most beautiful of the Cattleyas, notwithstanding that there are several others which are of dwarf habit and produce richly coloured flowers. The specimen we now figure is growing in the fine collection of Baron J. H. Schröder, The Dell, Staines, to whom we are indebted for the opportunity of having our drawing made. It is a highly-coloured and finely marked form, quite as good as any we remember to have seen. This species does not, however, vary so much as many other kinds.

Cattleya Aclandiæ is an evergreen species of dwarf stature, growing about six inches in height, and blooming at different times of the year, previous to the completion of its new growths. It generally produces two or three flowers on a spike; the sepals and petals are greenish yellow, heavily blotched with chocolate-purple, while the lip is a bright magenta, distinctly veined, which gives it an unique appearance. When vigorous the plants frequently make a second growth, which also produces flowers, these lasting in perfection for several weeks.

We have found these plants do best grown in pans or baskets, in a compost of good fibrous peat and lumpy charcoal, and good drainage must be provided to ensure success. We have also seen them well cultivated on blocks of wood, but as they

then require more attention as regards watering than when in pans or baskets, we prefer them grown in the latter way. An abundance of moisture should be provided for them during the growing season, when the plants will be throwing out their new roots. At this period close attention should be given in order to prevent the injuries that may occur from the attacks of insects on the young and tender roots, since these are frequently produced above the soil; even if the plants recover from such a check they are apt to get into a sickly condition, or to shrivel and dwindle away. *Cattleya Aclandiæ* is not one of the easiest of Orchids to cultivate, and for this reason it requires extra attention to keep it in good condition. We have, however, seen many fine plants of this beautiful species where it has had the treatment suitable to it. We have found the Cattleya house to afford the best temperature in which to grow it. A position as near the glass as possible, with not too much shade, will be found to suit it best; though care should always be taken to prevent the burning sun from injuring the leaves, and to keep the bulbs in a plump state, for, if allowed to shrivel or get into bad condition, the plants might as well be thrown away, since they seldom recover. During the resting season, therefore, sufficient water should be given to keep the bulbs from shrinking.

Always bear in mind that cleanliness is one of the great secrets of successful Orchid-growing, and that this little gem, if allowed to become the prey of insects or to get dirty, will invariably fall into a bad state of health from which it will rarely emerge. These pests may be kept under if taken in time. Both thrips and scale will sometimes attack the young growth, but they should be thoroughly routed out and destroyed.

Oncidium Phalænopsis.—This lovely Orchid comes to us from E. Salt, Esq., of Ferniehurst, Shipley, near Leeds. It is now extremely rare, and is seldom seen in collections. Mr. Salt informs us that this same plant, last year, before it was divided, produced one spike with six flowers. It is a glorious Orchid, allied to *O. nubigenum* and *O. cucullatum;* the flowers are, however, much larger than in either of these, and more beautifully coloured. The sepals and petals are cream coloured, barred, and spotted with purple; the lip is large, reniform, creamy white, spotted about the base with violet-crimson, the crest being golden yellow, and forming a striking contrast with the violet spotting which surrounds it. The species is a native of Peru.—B. S. W.

J. Nugent Fitch del. et lith.

J. Nugent Fitch

CYPRIPEDIUM FAIRRIEANUM.

CYPRIPEDIUM FAIRRIEANUM.

[Plate 70.]

Native of Assam.

Epiphytal. Acaulescent. *Leaves* green, radical, leathery in texture, distichous, loriform, obliquely apiculate, the base carinate and equitant. *Scapes* solitary in the axils, longer than the leaves, green, pilose, terminating in a short sheathing woolly bract from which the blossom emerges. *Flowers* medium-sized, elegantly venose; *dorsal sepal* large, oblong-cordiform, ciliated, concave, the apex recurved, blunt, greenish white flushed with carmine and beautifully veined with bright crimson-purple; *lateral connate sepals* united into one small ovate obtuse sepal, which is whitish with streaks of green and crimson-purple; *petals* oblong-lanceolate, deflexed and recurved "like the horn of a buffalo," hairy at the base, white flushed with green, and having longitudinal stripes and a marginal band of crimson-purple, the edge being undulated and ciliated; *lip* prominent, brownish-green with faint purple reticulations. *Staminode* orbicular-lunate, greenish white tinted with purple, downy, with a downy proboscis between the horns of the crescent.

Cypripedium Fairrieanum, *Lindley, Gardeners' Chronicle*, 1857, 740; *Hooker, Botanical Magazine*, t. 5024; *Van Houtte, Flore des Serres*, t. 1244; *Bateman's Second Century of Orchidaceous plants*, t. 140; *Reichenbach fil., Xenia Orchidacea*, t. 133; *Williams, Orchid Grower's Manual*, 5 ed. 153.

The Cypripediums form a very large genus of Orchids, which is also one of the most useful for decorating our Orchid-houses or plant stoves, as well as for exhibition purposes. Nearly all the species continue long in flower and are of easy cultivation. The plant before us was first flowered by A. Fairrie, Esq., of Aigburth, Liverpool, in 1857, and was exhibited in London by him and named by Dr. Lindley in his honour. Since that time it has become exceedingly rare, and is now to be met with in but very few collections. As far as we are aware it has only been once imported, a circumstance much to be regretted, as it is one of the most distinct and lovely of the whole family. Our drawing was made by M. P. Stroobant from a well-grown plant in the fine collection of Dr. Boddaert, of Ghent, Belgium, who has one of the best collections of Orchids in that country.

Cypripedium Fairrieanum is an evergreen dwarf-growing species, with light green leaves about three inches long. The flowers are produced singly on upright stalks. It blooms during the autumn months and continues in perfection for some considerable time.

This *Cypripedium* is not so free in its growth as many others, although we have seen it very fine in years gone by, and we are of opinion that if imported plants could only be obtained, cultivators would be able to succeed with it as well as with

any other. There is no doubt that on account of the plant being so rare, those who fortunately possess it are too anxious to increase it, and too frequently cut the plants into small pieces, which get into a bad condition and ultimately die. We have found the East India house to afford the best temperature in which to cultivate it, though we have grown it equally well at the warmest end of a Cattleya house. The material used was fibrous peat and charcoal. The pots should be filled three parts full of broken potsherds, a layer of sphagnum moss being placed on the top of the drainage material; and in potting the plant requires to be kept well elevated above the rim of the pot, so that the roots may not become sodden. Not having the thick fleshy pseudobulbs which some Orchids possess to support them, these plants require more attention as regards the application of moisture to the roots. Water should be given judiciously even when the plants are in vigorous growth, as, if too much is applied, the potting material becomes soddened and the plants get sickly. This species does not root so freely as many of the stronger growing Lady's Slippers and should be grown in a position where plenty of light is obtainable.

Cattleya aurea.—R. P. Percival, Esq., of Southport, has kindly sent us a glorious inflorescence of this splendid novelty, with four fully expanded flowers. This species resembles *C. gigas* in its growth, while the flowers are somewhat akin to those of *C. Dowiana*, but the markings on the lip are much brighter, and the golden yellow is much more prevalent than in *C. Dowiana;* the front part of the lip is bright magenta, while the sepals and petals are not partly rose coloured as in *C. Dowiana*, but are entirely nankin-yellow. Baron Schröder, of Staines, has also sent us a spike of this great beauty, but the variety differs a little from the preceding.—H. W.

Cypripedium Parishii.—A. Paul, Esq., of Edinburgh, sends us a fine spike of this curious Orchid, bearing six flowers. He informs us that the plant produced four spikes of six blooms each. When flowered in this way, it makes a fine object during the dull time of the year. It requires the same treatment as other Cypripediums, and delights in a good supply of moisture during the growing season.—B. S. W.

ODONTOGLOSSUM MADRENSE.

ODONTOGLOSSUM MADRENSE.

[Plate 71.]

Native of the Sierra Madre of Mexico.

Epiphytal. *Pseudobulbs* ligulate or narrowly-oblong, ancipital, three inches or more in length, pale green. *Leaves* lorate or linear-lanceolate acute, nervose, keeled, usually two but sometimes one only from the apex of each pseudobulb, sometimes with a leaf sheathing the base. *Scapes* lateral, twelve to eighteen inches long, bearing an inclined raceme of from six to eight flowers from the axils of brown membranaceous triangular acuminate bracts. *Flowers* fragrant, white blotched with reddish purple, three and a half to four inches in their vertical diameter, and somewhat less transversely; *sepals* lanceolate, acuminate, keeled behind, about two inches long, white, with an oblong bilobed reddish purple blotch at the base; *petals* broader, oblong, apiculate, white, with a bilobed purple blotch twice as long as that of the sepals and more distinctly separate; *lip* smaller than the sepals and petals, recurved, with a short hollow claw, which bears two small retrorse lateral lobes, having between them and in front two collateral pairs of retuse lijapulose calli; the front lobe triangular or trowel-shaped, cuspidate, with crispy margins, white with the disk and calli orange-yellow. *Column* short, greenish, wingless, hairy at the base.

Odontoglossum madrense, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., ii. 804; viii, 102.

Odontoglossum maxillare, *Hooker fil.*, *Botanical Magazine*, t. 6144 — fide Reichenbach; not of *Lindley*.

Our present subject, *Odontoglossum madrense*, is not only pretty but distinct, and very different in its growth, as well as in its flowers, from most of the Odontoglots, as will be seen by the accompanying figure, taken from the best grown specimen of the kind we have yet met with, which is in the select collection belonging to R. Vanner, Esq., of Camden Wood, Chislehurst, who certainly succeeds admirably in the cultivation of this plant. The subject from which our illustration was prepared, has flowered for two years in succession in the same grand way, and we have no doubt that as the plant gets more fully established it will produce more and more flowers on the spike. It is a very free-growing plant, but we find that it does best in a warmer temperature than that in which most Odontoglots thrive. The temperature of the Cattleya house seems to suit it best, and it should be suspended from the roof, and grown in a shallow pan in a compost of peat and sphagnum moss. It requires a liberal supply of water during the growing season, and should not be kept too dry when at rest, sufficient water being given to keep the soil moist, and the bulbs plump. We have also grown this plant successfully in the warm end of the Odontoglossum house.

Odontoglossum madrense is an evergreen plant, with upright pseudobulbs of a light green colour. The leaves are about six inches long. The flowers are produced on upright spikes which are produced from the sides of the bulbs after the plant has completed its growth; the sepals and petals are white with a large purplish brown blotch at the base of each; the lip is orange at the base, white in front. The plant blooms during the autumn months, and lasts for several weeks in perfection.

This is a plant that every Orchid-grower should possess, as it can be bought at a reasonable price, and does not take up much room. Propagation is effected by division, leaving two or three bulbs with the leading growth to each divided piece. We find the best time to perform this operation is just as the plant begins to start into growth. After division the young plants should be potted and kept in a shady place until they begin to grow, when more light should be given to them.

Mr. Lee's Orchids.—The collection of Orchids at Downside, Leatherhead, is fast becoming the most important in this country. East India Orchids are special favourites with Mr. Lee, and this section of the family is well represented. In the Phalænopsis house are to be found several grand plants; we particularly noticed some well-grown specimens of *Phalænopsis Schilleriana;* one plant of *P. amabilis* was the largest we have ever seen in cultivation, having many growths, and showing several flower spikes; *P. Stuartiana* was well represented, and seems quite at home here; *P. intermedia,* with its varieties *Portei* and *Brymeriana* were also in good form; as well as *P. violacea,* which was in flower. Mr. Lee is not content with having a few plants of this lovely class of Orchids, but possesses them by the hundred, so fond is he of them. The Vanda house also contains some marvellous examples of cultivation, *Vanda tricolor Warneri* being well in bloom, also other varieties of the same species, together with *V. lamellata Boxallii,* &c. In the same house were some well grown plants of *Cattleya Walkeriana,* in flower, suspended from the roof. Amongst the Cattleyas was a fine variety of *Cattleya labiata* in flower, the picture of health. The different kinds of *Aërides* and *Saccolabium* were looking equally well. In the Lycaste house, *Lycaste Skinneri amabile,* and *L. Skinneri alba* were in flower, also a fine lot of *Cattleya marginata,* and of *Lælia præstans,* and *L. Dayana;* indeed we had never before seen such a grand display of these little gems. In the cool houses the different sorts of *Odontoglossum* and *Masdevallia* were represented by some magnificent plants, some of which were in flower. Mr. Lee is still building Orchid houses with a view to giving his plants more room. One house in particular took our fancy, but of this we hope to furnish some particulars at another time.—H. W.

MILTONIA REGNELLI PURPUREA

MILTONIA REGNELLI PURPUREA.

[Plate 72.]

Native of Brazil.

Epiphytal. *Pseudobulbs* ovate, obtuse, compressed, diphyllous. *Leaves* lorate, acute, narrowed to the base, pale green, about a foot long. *Scapes* bearing three or four large showy flowers, each with a small bract at the base of its pedicel. *Flowers* showy, larger than in the type, being nearly three inches across; *sepals* lanceolate, about an inch and one-fourth in length, of a delicate shade of rosy pink, paler almost white at the edges, and with a darker median line; *petals* oblong, somewhat broader than the sepals and similar in colour; *lip* flat, subpandurate, broad, one and a half inch across, emarginate at the apex, cuneate at the base, of an intense magenta-crimson, marked with indistinct reticulations of deeper crimson; the disk white, and furnished with three small elevated crests, of which the middle one is shorter. *Column* deep crimson at the base, whitish at the apex.

Miltonia Regnelli purpurea, *Hort. Veitch; Williams, Orchid Grower's Manual*, 4 ed., 209; 5 ed., 224; *Floral Magazine*, t 490.

The Miltonias form a small genus allied to *Odontoglossum* and containing some beautiful species and varieties, most of which have been inmates of our stoves and Orchid houses for many years. We remember some of them as long as we have had the management of Orchids, which is now for forty years, but even before that time there were large specimens cultivated in some old-established gardens, such as those at Bothwell Castle, where may now be found many fine plants of *M. spectabilis* and its variety, *Moreliana*, which have been grown by Mr. Turnbull, the gardener, for more than forty years. *M. Clowesii* and *M. candida* have been in cultivation for quite as long a period. We mention these facts to show to the present generation of Orchid-growers that they should not complain as they are apt to do, that these plants are difficult to cultivate. This is not the case, in witness whereof these grand old plants, which have been grown, as above stated, for so many years, without much care having been bestowed upon them, may be cited. In the collection above referred to, for example, they do not profess to cultivate Orchids specially, but grow them in the ordinary plant stoves. Surely the cultivators of the present day should have no difficulty in attaining the same degree of success. We have seen *M. spectabilis* as much as three feet across, one mass of bloom, a sight never to be forgotten. We do hope that Miltonias will be more grown than they are at present, as they come into flower at a time when comparatively few Orchids are in bloom, and keep on flowering during the autumn months. They will be found useful for cutting purposes, as well as for our autumn exhibitions. What, for example, could be more

lovely than the plant of *M. spectabilis*, shown by A. Paul, Esq., at the Edinburgh Exhibition, in September of the present year?

The variety we now illustrate is a most beautiful one, and differs considerably from the type. We are indebted to the kindness of Mr. B. Findlay, of the Royal Botanical Gardens, Manchester, for the opportunity of figuring this gem, which was imported by him. Mr. Findlay is a great lover of Orchids, and has a nicely grown collection of them, amongst which flowering specimens may be seen at all times of the year. This, *Miltonia Regnelli purpurea*, is much richer in its colouring than the original species. It is evergreen, with light green pseudobulbs and foliage, which, together, reach to about ten inches or a foot in height. It produces its flower spikes from the sides of the pseudobulbs after they have completed their growth, which is during August or September. The sepals and petals are delicate rose colour, margined with white; the lip intense crimson-purple, with white crests.

This plant, we repeat, is of easy cultivation and blooms very freely, when grown in a mixture of rough fibrous peat and sphagnum moss, with good drainage. Our experience points to the coolest end of the East India house as the best position in which to grow it; but we have also found it to do well in the Cattleya house. It is necessary to bear in mind that the plant must be shaded from the burning sun, for it has thin leaves which are easily affected by the sun's rays; all the light possible should however be given. It will do well either in a pot or basket, and should not receive too much moisture at the roots, as Miltonias frequently suffer if too much water is given them. The soil must be kept freely moistened during the growing season, the supply of water being decreased when the season of rest approaches.

Odontoglossum grande.—C. Walker, Esq., Brettargh Holt, Westmoreland, sends us a grand spike of a fine variety of this, the king of Odontoglots. The spike bore six of its enormous flowers, and was much the finest we remember to have seen. Our artist has made a sketch of this spike, and we hope to publish it at some future time.—H. W.

J. Nugent Fitch del. et lith

J. Nugent Fitch

VANDA HOOKERIANA.

VANDA HOOKERIANA.

[Plate 73.]

Native of Borneo.

Epiphytal. *Stems* elongate, rigid, terete, pale green, producing aërial roots from the joints, resembling in habit and character those of its near ally, *Vanda teres*. *Leaves* erect, terete, tapered to a subulate mucronate point, channelled on the upper side, two and a half to three inches long, of a pale green colour. *Peduncles* from near the top of the stem, opposite, and longer than the leaves, erect, bearing a two to five-flowered raceme (two-flowered in the examples bloomed in this country). *Flowers* large, two and a half inches in diameter, and extremely beautiful, white, heavily striped and venosely dotted with deep rich magenta; *dorsal sepal* obovate, cuneate, wavy, projected forwards, white, tinted with rose; the *lateral sepals* similar in form, but larger, apiculate, white; *petals* spathulate oblong, obtuse, undulately crisped, standing right and left above the column and lip, white, spotted with magenta; *lip* with a pair of large triangular entire auricles standing erect, one on each side the column, of a deep purple colour, mottled with a paler hue, the front portion expanding from a cuneate base into a very broad transverse trifid limb, two inches broad, which is concave, the lower edge being projected forwards, the lateral lobes oblong obtuse, the central one shorter, bluntly ovate, crenate, undulate, white, the disk marked longitudinally with bold rich magenta-purple lines, from which diverge in the direction of the lateral lobes several parallel stripes of a similar colour, the front part of these lobes, as well as the front lobe itself, marked with dots of rich magenta-purple ranged in lines. *Spur* small, acute, with two blunt calli in front of its mouth. *Column* hairy below, white, tipped with purple.

Vanda Hookeriana, *Reichenbach fil.*, in *Bonplandia*, iv., 324; *Id. Gardeners' Chronicle*, n.s., xviii., 488. *Moore, Florist and Pomologist*, 1882, 155.

This lovely plant, which was unanimously awarded a First Class Certificate by the Floral Committee of the Royal Horticultural Society, when shown for the first time in this country in September last, appears to have been originally discovered by Lobb, at Labuan, being represented by No. 347 of his Collection; and from Lobb's specimen in the Hookerian Herbarium, it was named by Professor Reichenbach, in compliment to Sir William Jackson Hooker, and published amongst other Orchid notes and descriptions in the volume of the *Bonplandia* issued in 1856; so that, despite some well-merited laudatory remarks, such as "*planta admirabilis inexspectatissima*," and "*plantam insignem spectabilem*," it has been long in finding its way to our Orchid collections, which it appears to have done in the summer of 1873, according to Reichenbach, who adds, "I believe all went direct to Sir N. de Rothschild, Bart., and the plants one afterwards saw at other places were all presents from Tring

Park. Now, after nearly ten years, Mr. Hill, Sir N. de Rothschild's orchid grower, has succeeded in flowering the plant." It was also flowered about the same time by Mr. Ebbage, gardener to J. S. Bockett, Esq., Stamford Hill, from whose plant our plate was prepared. Our impression is, though we have not had an opportunity of making the comparison, that Sir N. de Rothschild's flowers were appreciably larger than those here delineated.

Vanda Hookeriana is a very distinct looking plant. It has terete foliage, resembling that of a slender form of the *Vanda teres*, but having the tips of the leaves more acute. The flowers are produced on short spikes, which are thrown out from the stem. As far as we have seen, only two flowers have been produced on a single spike, but since as many as five flowers have been counted on the imported spikes, we have no doubt that with judicious attention and cultivation it may produce more. The fact that it does so in the wild state speaks well for its free-flowering qualities. The flowers of this species are white, richly spotted with rosy purple, and the lip is longitudinally and transversely marked with lines of the same colour.

Vanda Hookeriana is a slender tall-growing plant, requiring an abundant supply of moisture during the growing season, after which it should be gradually dried off to predispose it to flower. A raft or block of wood will be found the best contrivance to grow it upon; this can either be plunged in a pot or hung up to the roof of the house, in a position where the plant may obtain plenty of sunlight and air. A little sphagnum moss about the roots will be found beneficial, since it will aid in keeping the young succulent points moist. While growing it should be placed in the East India house, and plenty of water should be given it. After flowering, a slight rest should be allowed, and after that water may again be given as soon as it shows signs of starting into growth.

This plant is subject to the attacks of scale and thrips, which should be disposed of by sponging and fumigation. Propagation is effected by cutting down the plants, care being taken to see that the shoots are furnished with roots. These cut portions should be put in pots, or placed on blocks or rafts, and kept in a shady position until established. After this operation has been performed, the old stem will throw out side shoots, which can again be detached when rooted should more stock be required.

EPIDENDRUM WALLISII

EPIDENDRUM WALLISII.

[Plate 74.]

Native of New Grenada.

Epiphytal. *Stems* erect, three to four feet high, reed-like, as thick as a raven's quill, leafy throughout, the sheaths, which nearly cover the spaces between the leaves, rugose and spotted with brownish-purple. *Leaves* distichous, oblong-lanceolate, acute, about five inches long, and an inch or rather more in breadth. *Inflorescence* racemose, the racemes many-flowered, with sheathing scales at the base, and furnished above with triangular-ovate bracts much shorter than the pedicels; the racemes are both terminal and lateral on the stems, the lateral ones being placed opposite the leaves. *Flowers* numerous and showy, fully an inch and a half across, picturesquely coloured, fragrant, with a pleasant smell of honey and musk; *sepals* and *petals* ligulate-oblong, acute, deep golden yellow, marked with rather small distant deep carmine-crimson spots; *lip* cuneately-flabellate, an inch broad, quadrifid, with a broad sinus in front, and smaller lateral ones, white, radiately pencilled with feathery lines of magenta-purple, which are minutely tuberculated, the disk yellow, bearing three or five short crests. *Column* adnate, the anther-bed with a quadrifid limb.

Epidendrum Wallisii, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., iv., 66; ix., 462.

We have here one of the comparatively few ornamental species of *Epidendrum*, but this, as has been truly remarked, is a real beauty—interesting, moreover, as representing a peculiar type of the genus, that has no pseudobulbs, but tall distichously-leafy stems, that bear both lateral and terminal racemes of flowers at the same time and on the same stems. *E. Wallisii* appears to vary somewhat in its flowers; one of those bloomed by the Messrs. Veitch and Sons being recorded as producing flowers with unspotted yellow sepals and petals, and a lip with three orange-coloured keels, and dark purple veins with small spots and lines on a white ground.

This wonderful plant, which was first described in 1875 by Professor Reichenbach, is peculiar in having its racemes of flowers both terminal and lateral, on which account it will at once be seen it is of a very floriferous habit. Our plate was prepared from a plant in the grand collection belonging to Sir Trevor Lawrence, Bart., M.P., Burford Lodge, Dorking, where, under the care of Mr. Spyers, it seems to have grown remarkably well. We were, indeed, much surprised to find that it has attained to such large dimensions. The first plants that flowered in this country were not more than from fifteen to eighteen inches high; and, according to Mr. Wallis's dried specimens, the plant in its native habitat is even dwarfer. Now

we have the plant, in the case of Sir Trevor Lawrence's specimen, attaining several feet in height, and producing an immense quantity of flowers, thus showing how Orchids may be improved by good cultivation. The flowers of this plant are generally produced in October and November, and they last in perfection for a considerable time.

Epidendrum Wallisii should be grown in the Cattleyâ house, and does best in a pot. We have found a mixture of peat and sphagnum to be the most fitting compost in which to pot it. The plant should be elevated well above the rim of the pot, and have a good supply of drainage. It delights in a liberal supply of water during the growing season; and when at rest should receive a less quantity, only just enough to keep the bulbs from shrivelling.

Vandas Flowering in a Small State.—It is generally thought that these Orchids only flower when they have attained considerable size, but such is not the case. At the present time may be seen in the Victoria Nurseries plants of *Vanda tricolor* and its varieties, as also of *V. suavis*, in bloom, though only from fifteen to twenty-four inches high, having in some instances two spikes each. These are not cut-down plants, but young offshoots that have been taken from the bases of the old stools, and grown singly in pots. The secret of this is, that the growth is well matured, in consequence of too high a temperature not being maintained during the growing season, but plenty of light and air given to the plants. These are conditions which Vandas delight in, as is proved by the results.—B. S. W.

J.Nugent Fitch del.et lith

LÆLIA ANCEPS.

J.Nugent Fitch

LÆLIA ANCEPS.

[Plate 75.]

Native of Mexico.

Epiphytal. *Pseudobulbs* narrowly ovate-oblong, compressed and two-edged, with prominent angles on the flattened sides, thus tetragonal, four to six inches long, clothed while young with large membranous scales. *Leaves* oblong-lanceolate, bluntish, two, or more rarely one, from each pseudobulb, five to eight inches long, leathery in texture, dark green. *Scape* terminal on the pseudobulbs, erect, often two feet long, terminating in a spike of three to five flowers, jointed, clothed with carinate bracts, and two-edged or ancipital, whence the name. *Flowers* very large and attractive; *sepals* lanceolate, acuminate, about three inches long, spreading, of a charming delicate pinkish-rose; *petals* ovate-acuminate, of the same colour as the sepals; *lip* three-lobed, the lateral lobes inflected over the column, purplish-rose, paler on the lower side, yellow, and striped with purple inside, the reflexed front edge deep magenta-purple; middle lobe oblong-acute, recurved, rich deep velvety magenta-purple, white towards the base, the disk within the base yellow, traversed longitudinally by an elevated thickened ridge, which terminates in front in three crests. *Column* semi-cylindrical, wingless.

Lælia anceps, *Lindley, Botanical Register*, t. 1751; *Hooker, Botanical Magazine*, t. 3804; *Paxton, Magazine of Botany*, iv., 73; *Williams, Orchid Grower's Manual*, 5 ed., 202.

Bletia anceps, *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 418.

In the subject of our present plate we have one of the oldest inhabitants of our Orchid houses. It was introduced as far back as the year 1833, and is one of the most beautiful of the numerous Mexican *Orchideæ*. As a winter-flowering Orchid it stands unrivalled, coming as it does into flower in mid-winter, and retaining its beauty for a long period. It should be grown in quantity by every one on this account, for a more useful decorative plant it would be difficult to discover.

There are several varieties of this handsome species, which are very distinct from the type. Notably there is *Lælia anceps Dawsoni*, a white form, which was figured in this work at Plate 44. Then there are *L. anceps alba*, *L. anceps Hillii*, *L. anceps Barkerii*, and *L. anceps rosea*, a pretty rose-coloured form, differing considerably from the type. Our plate was prepared from a plant in the collection of D. B. Crawshay, Esq., Rosefield, Sevenoaks, who was kind enough to allow our artist to make a sketch of the plant.

Lælia anceps is a dwarf-growing evergreen species, having oblong-ovate bulbs, from four to six inches in length, furnished with oblong-lanceolate leaves, which are

produced from the apex of the bulbs. The flower-spikes are erect, produced just as the young growth is completing itself. The sepals and petals are rosy lilac, the throat yellow, with dark purple markings, and the lip rich magenta.

This plant should be grown in the coolest end of the Cattleya house, in a position where it may obtain a plentiful supply of the sun's rays, and a liberal supply of air. If the cultivator could have partitioned off from the cool house a small division in which to grow the sun-loving Mexican Orchids, it would be advisable, as there are several kinds which delight in the same treatment as this gem, viz., *Lælia autumnalis*, *L. majalis*, *Odontoglossum citrosmum*, *Oncidium Barkerii*, *O. tigrinum*, and many others we could mention; in fact, the reason we so seldom see these plants grown as they should be, is that enough sun and air are not given to them.

Lælia anceps delights in a copious supply of moisture when growing, and like other Orchids when at rest requires only just sufficient to prevent the bulbs from shrivelling. It should be grown in a pot or basket suspended from the roof, in a good airy position; the compost best suited to it is good fibrous peat, with the addition of a little moss. The plant is increased by division just as it starts into growth.

Cattleya labiata.—H. Gaskell, Esq., of Woolton Wood, Woolton, Liverpool, has been kind enough to send us one of the finest inflorescences of this old favourite we have ever seen. The spike carries five large flowers, the sepals and petals are magenta-rose colour, the lip rich crimson. This is one of the most useful Orchids for autumn-flowering, and we regret to find it has become extremely rare.—B. S. W.

MASDEVALLIA DAVISII.

MASDEVALLIA DAVISII.

[Plate 76.]

Native of Peru.

Epiphytal. *Stems* slender, densely cæspitose. *Leaves* erect, dark green, leathery in texture, evergreen, six to eight inches long, narrowly ligulate-oblong, acute, carinate, narrowed downwards into the shortish petiole, which is invested at the base by a pale green sheath, an inch long, and having a shorter one at its base. *Scapes* slender, longer than the leaves, sheathed at the base, and furnished also with a sheathing oblong bract about their centre, and another just below the flower. *Flowers* nearly horizontal, golden yellow; *sepals* united into a sub-cylindraceous tube, half an inch long, gibbous at the base, the dorsal one ovately-triangular, passing into the filiform apex, which is three-fourths of an inch long, the lateral ones broader and longer, connate to beyond the middle, semi-oblong-ovate, broadest at the base, and suddenly acuminate near the apex, the opening having a narrow sinus; *petals* small, dimidiate-oblong; *lip* shorter than the petals, clawed, its limb linear-oblong, obtuse, deep crimson, sunk in the base of the sepaline tube, and there appearing like a small red eye at the bottom. *Column* wingless, toothed at the apex.

Masdevallia Davisii, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., ii., 710; *Id. Xenia Orchidaceæ*, iii., t. 3; *Hooker fil.*, *Botanical Magazine*, t. 6190.

New Masdevallias are being introduced to cultivation every year, but it is seldom that we get such a distinct and beautiful species as the subject of our plate, brought under our notice. This little gem is distinct from the other members of this ever-increasing genus both in regard to form and colour, and should be sought for and added to every collection where Masdevallias are grown. Our figure was taken from a plant belonging to W. Lee, Esq., Downside, Leatherhead, in whose collection these singular plants are well cared for, and at the time of our visit were looking remarkably well.

Masdevallia Davisii was discovered in 1874, by Mr. W. Davis, when travelling in Peru, at a considerable elevation, and was sent home by him to the Messrs. Veitch and Sons, of Chelsea, who distributed the plant. The flowers are produced singly on the erect peduncles, which proceed from the base of the leaf-bulb, and are generally produced in October and November, lasting several weeks in perfection. The colour is a bright chrome yellow, which from its distinctness contrasts well with any other kinds of Masdevallias that may chance to be in flower at the same time.

Masdevallia Davisii requires the same treatment as that recommended for *M. Harryana cærulescens*, under Plate 24, and is propagated in the same way.

The Effect of Fog on Orchids.—It is astonishing to notice the effects upon Orchids of this the most disagreeable of all natural phenomena. The most vexing part of the matter is, that as regards the culture of Orchids we are unable to cope with it. Extremes of heat and cold, high winds, and hailstorms, heavy falls of snow and rain—all these we are in a great measure able to prevent from doing any harm to our plants; but the fog demon, however careful we may be, outdoes us. We may keep our doors closed, pull down the blinds, shut up the ventilators, but still he is upon us, entering by the laps of the glass, or through the crevices of the framework of the house. Nearly all Orchids which happen to be either in flower or bud at the time a fog comes on, fall a prey to its destructive powers. We have seen hundreds of buds of *Phalænopsis*, flowers and buds of *Calanthe*, and the inflorescences of *Cattleyas*, and other Orchids, turn yellow, and the flowers drop off in a very few hours. All this is extremely vexing, especially if after having watched some favourite plant, perhaps for years, just as it is showing flowers for the first time, we see them thus come to an untimely end. It is fortunate that some of the Orchid flowers are able to withstand its effects. Of course, our brother cultivators in the country have not so much to fear as those have who are located in the immediate neighbourhood of the metropolis and other large cities, and we are inclined to envy them their purer surroundings at this trying season of the year.—H. W.

J. Nugent Fitch del et lith.

VANDA TRICOLOR.

VANDA TRICOLOR.

[Plate 77.]

Native of Java.

Epiphytal. *Stems* tall, erect, leafy, producing stout aërial roots. *Leaves* distichous, broadly lorate, channelled, longer than the inflorescence, overlapping at the base, obliquely bilobed and somewhat erose at the apex. *Racemes* few-flowered. *Flowers* handsome, sweet-scented, roundish in outline, but longer than broad, their depth being about two and a half inches, beautifully spotted, the pedicels white, striately furrowed; *sepals* oblong-obovate obtuse, the edges rolled back, unguiculate, fully an inch long, coriaceous, pale creamy yellow, with a narrow marginal band of delicate rosy pink, spotted throughout, except at the edge, with deep rich brownish-red, white at the back; *petals* similar in size, form, and colouring, but with the pink edge less distinct, and the spots somewhat fewer in number, and inclined to coalesce into stripes; *lip* of about equal length, three-lobed, with a pair of erect rounded colourless lobes, standing one on each side the short blunt compressed white spur, and a convex cuneate deeply emarginate middle-lobe, which has three ridges extending from the disk to the front, two of which run out quite to the apex, and two white ridges at the mouth of the spur behind the disk; the colour is a bright rosy magenta, paler at the tip, the disk marked with about five white lines, of which the three central ones are longest. *Column* free, short, thick, white.

Vanda tricolor, *Lindley, Botanical Register*, 1847, *in note under* t. 59; *Id. Paxton's Flower Garden*, ii., t. 42; *Id. Folia Orchidacea*, art. *Vanda*, No. 10; *Pescatorea*, t. 42; *Warner, Select Orchidaceous Plants*, ii., 39 (var. Warnerii); *Van Houtte, Flore des Serres*, t. 641; *Lemaire, Jardin Fleuriste*, t. 136.

Vanda suaveolens, *Blume, Rumphia*, iv., 49.

It is with great pleasure that we here introduce to our readers a genus of Orchids, which has been grown and exhibited for many years, and of which we have in former days seen some wonderful examples produced. What a contrast with those we meet with at the present time, when few really fine specimens are brought out by exhibitors! What is there more splendid or majestic than a *Vanda* when grown into a large specimen? The Vandas, indeed, possess good qualities that few other Orchids can boast of, for they are stately in their growth, they have beautiful evergreen foliage, they are of graceful habit, and their showy flowers produced in fine spikes on either side of the plant are deliciously fragrant, and continue in perfection for six weeks or more. Sometimes a plant that has but one stem will produce three or four spikes of flower, and bloom twice in a year. We have had plants only twelve inches in height produce two flower spikes, and have bloomed many in an equally dwarf state, as we are glad to

know that others have also done. We are, moreover, glad to notice that growers are now more generally successful in retaining the leaves down to the rim of the pot.

It has been said that Vandas are difficult to flower, but if the proper treatment is given, there is no difficulty about it. We have been growing and exhibiting these plants for nearly forty years, and can with confidence assert that they are the most useful Orchids we have met with for exhibition and decorative purposes. They are also invaluable for furnishing cut flowers to be used either in button-hole bouquets, or in any other convenient manner. The plant now figured, our sketch of which was taken from a small specimen at the Victoria Nurseries, Upper Holloway, we consider the true *Vanda tricolor*; and there are besides other specially fine forms, which in time we hope to illustrate.

Vanda tricolor is an evergreen plant, with gracefully recurved foliage. It grows to the height of five or six feet, and produces "breaks" freely from the sides of the stem, generally at the base, so that in time the plants form large specimens, and when the growths get strong they all flower. We have seen as many as from ten to fifteen spikes on the same specimen. The sepals and petals are pale yellow spotted with reddish brown, and the lip is magenta, striped with white at the base. The plants bloom at different times of the year, and continue in perfection for about six weeks, perfuming the atmosphere of the house in which they are grown. These Vandas are natives of Java, and are of easy cultivation when they obtain suitable treatment. We have grown them in the same house for more than twenty years, and have never found any difficulty with them, but the plants have been constantly growing, improving, and blooming.

The house in which we grow our Vandas is sixty feet in length, and eighteen feet in width, with a centre and side tables, covered with slate, the floors being of cement; three pipes pass round the house, and these are fitted with about four zinc troughs to hold water during the summer. The temperature during the resting season should be a minimum of 60°, but a few degrees higher would not do any harm at night; in the daytime it should range about 65°, unless by sun-heat, under the influence of which we allow it to get a few degrees higher. We always give air when the temperature is 65°, but always avoid cold draughts. We usually moisten our houses twice a day, morning and evening, if the weather is at all fine and the house dry; but the application of moisture should depend upon the weather; during the dull months of autumn and winter a little will suffice, but in summer, of course, a considerable amount of moisture spread over the tables and paths will be required. We always avoid throwing water on the pipes to cause steam, and we seldom syringe the plants unless there are some in a shrivelly state, in which case they require to be kept in the shade, and should have a slight syringing morning and evening in summer. The material we use for potting is good sphagnum moss, and plenty of drainage. They will also thrive in baskets suspended from the roof.

(*Continued under* Plate 78).

del.et lith.

ZYGOPETALUM ROSTRATUM

ZYGOPETALUM ROSTRATUM.

[Plate 78.]

Native of Demerara.

Epiphytal. *Pseudobulbs* oblong-ovate, subcompressed, furrowed, enveloped at the base by pale brown membranaceous bracts. *Scapes* on the young growth, one to two flowered, issuing from the axil of the bracts which invest the immature pseudobulbs. *Leaves* lanceolate acute, plaited, about six inches long. *Flowers* large, six inches in depth, the dorsal sepal with the two petals directed backwards, the lateral sepals standing right and left behind the lip; *sepals* linear-lanceolate, three inches long, half an inch wide at the base, tapered to an attenuated point where they are bright green, whitish at the base, slightly stained along the median part more than halfway up with dull brownish purple; *petals* similar in size, form, and colouring; *lip* ovate acuminate, recurved, nearly three inches long and over two inches wide, pure white, yellowish behind the disk, which is furnished with a small angulate plaited frill or ruff, of a pale lilac purple, and marked with a few (about ten) lines of the same colour, half an inch long, which radiate from the front part of the ruff. *Column* white, arching, semi-cylindrical, with rounded wings near the apex, where it terminates in a short projecting beak.

Zygopetalum rostratum, *Hooker, Botanical Magazine*, t. 2819 (as Zygopetalon).
Zygosepalon rostratum, *Reichenbach fil., Annales Botanices Systematicæ*, vi., 666.

We are now about to bring under the notice of our readers one of our oldest Orchids, and, withal, one of the most rare. Its foliage is pleasing, and its flowers are not only large and showy, but of the most charming character, as will be seen from the accompanying representation, for the opportunity of securing which we are indebted to Sir Trevor Lawrence, Bart., M.P., in whose well-known superb collection at Burford Lodge, one is at all times certain to find a grand display of rare Orchids in bloom, such as will well repay a visit. This *Zygopetalum* makes a grand specimen for exhibition purposes; we used to exhibit it many years ago at the Regent's Park and Chiswick Shows, with twenty or more of its handsome flowers upon the plant, and we may add that it was greatly admired. It produces flowers from every growth, and keeps a long time in good condition, so that we could always depend upon it for the May and June exhibitions.

Zygopetalum rostratum is a compact-growing evergreen plant, with small pseudobulbs; it attains the height of eight inches, and produces its flowers with the young shoots sometimes twice and even three times a year, according as it makes its growth. The sepals and petals are of a yellowish green; the lip large, two inches

across, white, with a pale purple or lilac ruff, and slightly striped at the base with the same pale purple colour. The flowers last in perfection for several weeks, providing they are kept dry.

This plant is best cultivated in pans, as it has a rhizome or creeping stem that likes to root over the surface of the soil. It is of free growth when it obtains the requisite treatment. We have found it to thrive best in the East Indian house, on a side table, as near the light as possible, but not exposed to the sun, as the leaves are tender and easily get spotted. When a suitable place is found, let it remain in it. It requires to be kept constantly moist at the roots, as it is nearly always growing. We cultivate it in rough fibrous peat, with the addition of sphagnum moss, and give good drainage. It does not require much material to grow in, and it will repay all the pains bestowed upon it, as it produces such a number of flowers.

The plant can be divided when strong and in vigorous growth, as it makes roots quickly. It must be kept free from insects.

Vanda tricolor. (*Continued from* Plate 77).—The great secret of getting the Vandas to bloom freely is to give them plenty of light and air, and only sufficient shade to keep their leaves from scorching. We use a very thin shading material made on purpose, and both ourselves and our friends find it suitable for nearly all kinds of Orchids.

These plants are subject to the attacks of a small white scale insect, which, if allowed to get established, is very troublesome, but which can be easily kept under by sponging. If the plants are in a healthy state there is not much fear of their going wrong; but if the scale should be found on them it must be taken in hand in good time. The best plan is to get a little soft soap and make a lather, and rub this over the leaves, allowing it to remain until the next day; then to wash it off, when it will be found that the scales will come off easily. The cultivator should, in fact, never allow his plants to get infested with the scale. We do not find that any other insects attack them, excepting the green fly, which sometimes makes it appearance when they are in flower, and this may be removed with a fine hair brush. Vandas should never be smoked, as it causes the lower leaves to drop off, which is a great disfigurement to the plants.

J.Nugent Fitch del.et lith.

J.Nugent

ODONTOGLOSSUM GRANDE.

ODONTOGLOSSUM GRANDE.

[Plate 79.]

Native of Guatemala.

Epiphytal. *Pseudobulbs* ovate-oblong, compressed, ancipitous, about three inches high, diphyllous, sheathed with large membranaceous brown scales at the base. *Leaves* broadly-lanceolate, striated, wavy, dark green above, dotted beneath with numerous minute dark brown dots. *Scape* radical, two to five flowered, furnished at intervals and beneath each flower with a lanceolate membranaceous bract. *Flowers* very large and very handsome, seven inches across and nearly eight inches in depth, yellow, with bright chestnut spots; *sepals* oblong-lanceolate acute, wavy, four inches long, and about one inch wide, the lateral ones falcate, bright yellow, transversely blotched nearly to the tip with irregular mostly transverse blotches of glossy chestnut red; *petals* oblong, acute, three and a half inches long, by about an inch and a half broad, slightly undulated, the upper two-thirds clear yellow, the base marked with an obcordate spot of shining chestnut red, an inch and a half deep, and which appears to be pectinately toothed at the sides; *lip* smaller, creamy white, roundish emarginate, unguiculate, auricled at the base, with a row of small pale red irregularly-shaped blotches round the margin, and a few concentric bands of the same colour in front of the disk; the claw of the lip is yellow marked with red blotches, and having a large lobed tubercle in front. *Column* semi-cylindrical, downy, with two blunt wings.

Odontoglossum grande, *Lindley, Botanical Register*, 1840, misc., 94; *Bateman, Orchidaceæ of Mexico and Guatemala*, t. 24; *Id. Monograph of Odontoglossum*, t. 8; *Hooker, Botanical Magazine*, t. 3955; *Van Houtte, Flore des Serres*, t. 21. *Paxton, Magazine of Botany*, viii., 49; *Jennings, Orchids*, t. 13; *Morren, Annales de Gand*, 1845, t. 37; *Regel, Gartenflora*, viii., t. 270; *Williams, Orchid Grower's Manual*, 5 ed., 234.

We here present a picture of one of our oldest cultivated Orchids, and one which, we believe, is a universal favourite, for no person who is fortunate enough to see this grand old plant in flower, can fail to admire its beauty. The flowers make their appearance, too, when Orchid blossoms are scarce, and at our autumn exhibitions it becomes invaluable on this account. There are but few varieties of this species, but all are worth growing; and they can be easily grown by everyone who has a cool greenhouse. The specimens that were exhibited at the Edinburgh Show in September last made a grand display. Our drawing was prepared from a truly noble example, grown in the fine collection of C. Walker, Esq., Brettargh Holt, Milnthorpe, who has also many other rare and remarkable specimens of the different classes of Orchids, which Mr. McGregor, the gardener, has been very successful in cultivating. This interesting collection was removed a few years ago from Lanark, N.B., to its present location at Brettargh Holt.

Odontoglossum grande is an evergreen plant, with compressed ovate pseudobulbs, about three inches in height. The foliage is of a light green, and the plants produce their flower scapes from the side of the bulbs when the growth is nearly completed. The flowers are of large size, and several together in a short erect or spreading spike. The sepals and petals are of a lemon yellow, barred and spotted with rich chestnut brown. The plant blooms during August, September, October, and November, and continues for several weeks in beauty, if the flowers are kept free from damp.

This species is of easy cultivation. It seems to thrive well in rough fibrous peat, with good drainage, and elevated above the pot rim. A moderate supply of water should be given in the growing season, which is during spring and summer, but in the resting season only just enough should be given to keep the bulbs in a plump state. The warmest end of the Odontoglossum house will suit it admirably, and there it should be placed as near the glass as possible, giving just enough shade to keep the burning sun from injuring its foliage.

Orchids for the Drawing Room.—We often hear objections made to the growing of Orchids on account of the great heat which, it is alleged, is kept up in the houses required for their cultivation, many ladies and gentlemen not caring to go into these heated structures. There are, however, many ways in which Orchids may be seen and enjoyed without entering the houses wherein they are cultivated, one of which we witnessed a few weeks ago when calling at Bury to see the collection of O. O. Wrigley, Esq. This gentleman has built a warm conservatory adjoining his drawing room, and he was kind enough to show us how he makes use of this to ensure an accessible display when his plants are in bloom, namely, through a window looking into the conservatory, by which means the beautiful flowers are brought fully into view. The plants are plunged in a bed of bright green *Selaginella*, and mixed with choice ferns, and altogether have a beautiful effect. Sometimes the display is produced by some one kind of flower, such as the *Gloxinia;* sometimes by another, as *Odontoglossum Alexandræ,* or *O. Pescatorei,* and other kinds, their graceful spikes overhanging the ferns and green mossy bed of *Selaginella,* and thus producing a charming picture. The flowers can always be removed as soon as they show signs of decadence, and be replaced by others which are fresh and fair. There are many cool Orchids that can be treated in this way, and the change increases the interest of the group, by securing freshness and variety. We think Mr. Wrigley's idea of introducing his grand blooming Orchids to the notice of his family and friends without obliging them to go through the heated houses in order to see them, a very excellent one, especially during winter, when ladies are often prevented by the damp and foggy atmosphere from venturing out of doors. The window consists of a large sheet of plate glass, which effectually prevents any damp from entering the room; and through this one gets a fine view of the flowery scene. It is to be regretted that this, or some similar arrangement, is not more frequently adopted in similar cases, as it may generally be carried out with very little trouble and expense.—B. S. W.

PHALÆNOPSIS MARIÆ.

PHALÆNOPSIS MARIÆ.

[Plate 80.]

Native of the Eastern Archipelago.

Epiphytal. *Plant* stemless, with flat aërial clinging roots. *Leaves* deflexed, distichous, oblong or ligulate, acute, somewhat channelled, two inches or more in width, stoutish in texture, dark green, glossy, obscurely striate. *Scape* radical, bearing a many-flowered drooping raceme, shorter than the leaves, and proceeding from their axils. *Flowers* of medium size, elegantly coloured; *sepals* narrowly-oblong, bluntish, about an inch long, the lateral ones slightly falcate, white, with about six bold transverse bars or blotches of a deep chocolate red, the basal spots magenta-coloured like the lip; *petals* shorter, broader and more obovate, marked in a similar manner, but with fewer blotches, the colour being the same as in the sepals; *lip* obovate oblong, apiculate, convex, somewhat constricted at the sides, of a rich deep magenta-rose, the middle lobe plane not pilose. *Column* short, white, without fringes at the apex.

Phalænopsis Mariæ, *Reichenbach fil. M.S.*

In this little Moth Orchid we have a very pretty novelty, for the opportunity of figuring, which we have to acknowledge our indebtedness to the Messrs. Veitch and Sons, of Chelsea, for whom the plant was collected by Mr. F. W. Burbidge, now the energetic Curator of the Trinity College Botanic Gardens, Dublin. Mr. Burbidge has been good enough to inform us that the plant was found in a totally new habitat, at an elevation of 2,000 feet above the sea level. Only four plants were originally found, although a large sum was offered for specimens of it to the natives, in whose language it is known as the Rain-flower, on account of its opening its first blossoms at the commencement of the wet monsoon. Mr. Burbidge adds that it was discovered by him "when travelling in the Eastern Archipelago for the Messrs. Veitch, and that it has been named by Professor Reichenbach in compliment to Mrs. Burbidge.

"At first sight the plant both in its habit of growth, and in its blossoms, is suggestive of *Phalænopsis sumatrana*, especially the beautiful variety of that species known as *lilacina*, but in *P. Mariæ*, there is no brush-like apical lobe to the lip, nor is the apex of the column fringed as in that species. The bold amethyst-coloured blotches on the snow-white sepals and petals are very lovely, and, although the flowers are not so large as those of some others of its congeners, it affords, nevertheless, another illustration of the pleasing beauty of mountain flowers. It has a singularly hardy constitution, and so bears the vicissitudes of transit better than many of its allies."

Though this new species is not so showy as many other kinds, it is quite worthy of a place in the most select collection, the flowers being exceedingly pretty and very pleasingly coloured. It has bloomed with the Messrs. Veitch during the past year, and was exhibited by them, and greatly admired at one of the Royal Horticultural Society's Meetings. It is of this plant, thanks to the importers, that our artist was allowed to avail himself in preparing the figure we now publish.

It produces drooping foliage of a light green colour, and bears several flowers in a pendent raceme. The sepals and petals are white, transversely barred with reddish brown and rosy purple, and the lip is of a deep rich magenta.

The plant requires the same kind of treatment as the other species of *Phalænopsis*, which has been already explained in connection with Plates 11 and 39 of our first volume.

Orchids at Woolton Wood, Liverpool, the Seat of H. Gaskell, Esq.—We have had great pleasure in visiting this place, and may state that we were greatly surprised to find such a fine collection of Orchids brought together in so short a space of time. Mr. Gaskell has commenced in the right way, in that he has built good houses for the various Orchids that come from different climates, and require a distinct mode of treatment. No doubt this collection will take rank amongst the finest in the country, especially as it is the good kinds only that are being added to it. This, indeed, is the only way in which a really select collection can be made; but when this is done, the plants are of real value, and every day become more and more interesting to the owner. In this case, Mr. Davis, who has the care of the plants, takes great interest in their welfare, the result being that they are thoroughly well attended to.

We noticed in the Woolton Wood collection some fine specimens of *Cattleya labiata* in full bloom, one plant having had several grand spikes of flowers upon it; there were also in bloom *C. exoniensis*, *C. gigas*, and a very fine *C. maxima*, which were extremely showy. In the same house, along with many other fine Orchids, were the lovely *Vanda cærulea*, with fifteen finely-coloured blossoms; a superb variety of *Cymbidium Mastersii* in full beauty, and some grand Cattleyas and Lælias. We also noticed a wonderful specimen of *C. Skinneri alba*, such as we had no idea was to be found in the country.

In the next house was a fine lot of plants, many of them in bloom. Among the Calanthes, which make a grand show at the dull season of the year, we noticed many fine Odontoglossums, including some good varieties of *O. Alexandræ* in full bloom. The cool Orchids were thriving well in the different houses.

We were glad to see that Mr. Gaskell intends to have a good collection of East Indian Orchids. We noted some fine specimens of *Phalænopsis*, *Saccolabium*, *Vanda*, &c. These genera rank amongst the finest of their race. In addition to the Orchids there are here other valuable plants, and a nice fernery, which is always interesting, as the plants associate so well with the Orchids. We regret that our space is too limited to permit us to give further details of this charming collection.—B. S. W.

CATTLEYA CRISPA BUCHANANIANA.

[Plate 81.]

Native of Brazil.

Epiphytal. *Stems* clavate, eight to ten inches long, furrowed, monophyllous. *Leaves* evergreen, coriaceous, about a foot long, oblong-lanceolate, obtuse, emarginate. *Scape* emerging from a large oblong compressed leafy spathe, which is obliquely acute at the apex, and bearing a four to seven-flowered raceme. *Flowers* large and very handsome, with a beautifully crisp-edged and veined lip; *sepals* lanceolate-obovate, that is, broadest upwards, the margins revolute at the base, the tips recurved, of a very delicate tint of blush white; *petals* of the same colour as the sepals, much broader, ovate, with the base cuneate, and the margin strongly undulated and crisped; *lip* with the basal part or side lobes rolled around the column, recurved in front, crisped at the edge, and showing a feathery blotch of purplish-crimson on a white ground: the throat bright yellow with several purple-crimson streaks in the middle part, these passing outwards to the antical portion, which is broadly ovate acuminate, recurved at the tip, strongly frilled or crisped, of a bright rich rosy crimson, margined with white, and charmingly reticulated over the apical portion. *Column* enclosed, clavate, semiterete, marginate.

Cattleya crispa Buchananiana, *supra.*

The charming subject we now have the pleasure to bring under the notice of our readers is a grand variety of the old *Cattleya crispa*, and one of the most beautiful and richly-coloured flowers that have ever come under our notice. There are several varieties of *Cattleya crispa*, but that which is now before us is the finest we know of, and moreover produces its flowers in great profusion. We exhibited a specimen of this variety at the International Show in Edinburgh, where it was greatly admired by the lovers of Orchids, the plant being finely in flower. Blooming at a time when there are comparatively few Orchids in the flowering state, *C. crispa* and its varieties come in extremely useful at the many exhibitions held during the month of September, and help to make a good display. There is some difference of opinion amongst the Orchid authorities as to the proper generic name of this plant, some referring it to *Cattleya* and some to *Lælia*; we follow the original describer of the species, the late Dr. Lindley, by retaining it in *Cattleya*; in truth there is but a very slight technical difference between them, though in any case *Cattleya* has precedence of *Lælia.*

Our drawing was taken from the specimen above alluded to before it was exhibited in Edinburgh. That plant is now in the possession of J. Buchanan, Esq., Oswald Road, Edinburgh, in whose honour it has been named. Mr. Buchanan is a great

admirer of good Orchids, and is forming a nice collection, in which are already included some rare species.

Cattleya crispa Buchananiana is of the same habit of growth as the type, and has dark evergreen foliage and large flowers, which stand out boldly from each other. The sepals and broader petals are of a blush white; the lip large, of the richest crimson, and more crisped at the edge than in most of the species. It produces from four to seven flowers on the spike during the months of August and September, and continues for two or three weeks in full beauty.

Our present subject is a free-growing plant, and thrives under the same treatment as *Lælia purpurata*, being very much like it in its habit of growth. The requisite material in which to cultivate it is good fibrous peat, accompanied by ample drainage, as it requires a moderate amount of moisture, when in vigorous growth, which is during the winter season; of course at that time of year the soil does not dry so rapidly, and therefore water given twice in the week will usually supply all the wants of the plants, but should the weather be very bright, more might be required. This plant makes its growth in autumn and winter, and therefore must be kept as near the light as possible, which will induce greater vigour, and the flowers will be produced more freely. The burning rays of the sun must be kept from the foliage by means of moderate shading.

This, like other Cattleyas, is subject to the attacks of insects, which must be well sought after, so as to be dislodged before they get too strongly entrenched upon the plant. White scale quickly disfigures the leaves if allowed to remain. Moreover, the thrips will sometimes attack the young growth, and should be destroyed by syringing.

This species is easily propagated by dividing the bulbs, leaving several to each piece. This should be done when the plants are starting into growth. After this they must be kept shaded until they make fresh roots in the new soil. A plant should never be divided unless it is in vigorous health, for otherwise the experiment will probably fail.

Phajus tuberculosus.—This great rarity has at last flowered again with Baron Schröder, The Dell, Staines. We believe it was first bloomed in this country by Sir Trevor Lawrence, Bart., M.P., when it was exhibited by him at South Kensington. It is a great beauty. The flowers are produced in an erect spike; the sepals and petals are pure white, the basal lobes of the lip are yellow, spotted with purplish crimson, producing a bronzy effect, the surface being studded with hairs, and the apical portion white, spotted with rose, and very finely and densely frilled, while the crests on the disk are orange-yellow. This splendid novelty is considered very difficult to cultivate, but Mr. Ballantyne seems to have hit upon the plan of successfully managing it.—H. W.

J Nugent Fitch del et lith

J Nugent Fitch

ODONTOGLOSSUM LONDESBOROUGHIANUM.

ODONTOGLOSSUM LONDESBOROUGHIANUM.

[Plate 82.]

Native of Mexico.

Epiphytal. *Pseudobulbs* oblong-ovate, two and a half inches long, glaucous green, becoming furrowed when old. *Leaves* deciduous, ligulate acute, channelled towards the base, of a light green colour. *Scape* three to six feet long, arching, bearing at the upper end a many-flowered raceme. *Flowers* showy, with a large conspicuous bright yellow lip; *sepals* oblong, apiculate, concave, narrowed at the base into a short claw, slightly wavy at the edge, pale yellow, transversely barred with short oblong blotches of chestnut-red; *petals* ovate, concave, with a broad base, sessile, the apex broad, obtusely apiculate, the margins wavy and reflexed about the middle, the upper portion coloured like the sepals, and marked with transverse bars, the basal part marked concentrically; *lip* with a long yellow claw, spotted with chestnut-red, and having at its base two small oblong obtuse erect yellow auricles (sagittate), the flat transversely reniform limb one and a half inch wide, of a clear bright yellow; between the basal auricles are two shorter rounded incurved lobes, forming a scoop-like hollow, which is yellow, spotted on the inside, the front being produced below into a prominent keel, having a blunt arm on each side at the base. *Column* slender, semi-terete, curved, yellow, with a red line on each of the very shallow wing-like angles.

Odontoglossum Londesboroughianum, *Reichenbach fil.*, in *Gardeners' Chronicle*, N.S. xvii., 772.

We have in *Odontoglossum Londesboroughianum* one of the most distinct and brilliantly coloured of the Odontoglots, for there are but few of the species that we have in our plant stoves which produce flowers of a bright golden-yellow colour. There are many varieties of it dispersed through different collections, the individual forms varying in the size of their flowers and in the depth of their colour, some being of a paler yellow than others. The form which we here illustrate is a very good one, and was received from the fine collection of H. J. Buchan, Esq., Wilton House, Southampton. Under the care of Mr. Osborn, the gardener at Wilton House, it has bloomed freely, and, with its long graceful spikes overhanging the foliage of other plants, it is found to have a charming effect. It is also extremely useful when cut for ornamenting vases, as in these days of æstheticism yellow always proves an acceptable colour in floral decoration. The blossoms, moreover, have a brilliant effect when tastefully arranged in vases, if used amongst flowers of other appropriate contrasting hues.

Odontoglossum Londesboroughianum is a deciduous plant, losing its foliage in winter; the leaves are of a light green colour, while the pseudobulbs are glaucous. The stems bearing the inflorescence are from three to six feet in length, the

number of flowers produced being rather sparing. The sepals and petals, which are concave, are yellow, barred with reddish brown, while the lip is of a bright rich yellow. The plant blooms during the autumn months, and continues in perfection for several weeks.

We have found this species to thrive well when fastened on blocks of wood, and also when grown in baskets, with good drainage and rough fibrous peat or sphagnum moss; it requires a good supply of moisture at the roots in the growing season, but a less quantity when at rest. When grown on blocks it is necessary that more water should be given, as the blocks dry up quickly. The Cattleya house seems the most suitable structure in which to cultivate it, and here it should be suspended from the roof, so that it may be as fully exposed to the light and as near to the glass as is possible.

Orchids at Pickering Lodge, Timperley, the Seat of George Hardy, Esq.—This collection of Lælias and Cattleyas is well worth a journey to see. The plants are well grown, and form a finer lot of specimens than can be met with in most collections. They have been cultivated here for some years past, and a portion of them have been grown on from small plants. We noticed some very fine specimens of *Lælia purpurata*, from two to three feet in diameter, and showing a fine series of flower sheaths for blooming this season; also others of *Cattleya crispa superba*. There is a *Cattleya Skinneri*, a wonderful specimen, three feet across, showing a goodly number of sheaths. *Cattleya Warnerii superba* is a grand specimen, and of this species Mr. Hardy has many fine varieties. There are also notable specimens of *C. Mossiæ*, *C. Trianæ*, and the beautiful *C. Mendelii*, not only fine plants, but good varieties. *Cattleya exoniensis* we found splendidly in bloom—one of the best of the forms, of which there are several in cultivation; in this the lip was of the richest colours we have seen. There are many other fine Cattleyas and Lælias in the collection, many of which have taken the highest awards at the great shows at Manchester.

There are also in this collection fine examples of *Dendrobium*, *Saccolabium Aërides*, *Phalænopsis*, and other East Indian Orchids; and a very large number of cool Orchids, such as *Odontoglossum Alexandræ;* of this we saw a fine branched spiked form in full beauty among the many hundreds of good plants in the house, which contains also notable examples of *O. Pescatorei*, various species of *Masdevallia*, and others. This collection is one full of interest, as there are always many fine varieties in blossom, and the plants are well grown and duly cared for.—B. S. W.

Cattleya Trianæ alba.—E. Wright, Esq., of Gravelly Hill, Birmingham, has sent us a fine form of this beautiful Cattleya. The whole of the flower is pure white, with the exception of a pale yellow blotch in the throat. We are pleased to find that this charming variety is becoming more plentiful, as white flowers are always in request, and good white Cattleyas are never too plentiful.—H. W.

CATASETUM VERISTYANUM

CATASETUM CHRISTYANUM.

[Plate 83.]

Native of the Amazon Country.

Epiphytal. *Stems* stoutish, fusiform, jointed, six to eight inches long, and clothed with whitish membraneous sheaths. *Leaves* several from the apex of the younger stems, lanceolate-lorate, acuminate, plaited, the basal part channelled and sheathing the upper part of the stems. *Scape* radical, bearing an erect six to seven flowered raceme, with distinct sheathing scales below. *Flowers* remarkable in form, large, spreading, brown and green, each with a narrow bract at its base; *sepals* lanceolate-acuminate, the dorsal ones erect, the lateral ones spreading horizontally, dark reddish or chocolate brown; *petals* connivent, parallel with the dorsal sepal, of a lighter brown, obscured, spotted with still paler brown at the base; *lip* short, with a bluntly conical saccate pouch, and a three-lobed limb: the front lobe obovate apiculate, bent down on both sides, olive-green, ciliate with short brown fringe-like teeth, the lateral lobes squarish, bright green, with much longer purple fringes, the spur or pouch pale brown outside, darker brown within, and having a square oblong mouth with the front margin nearly straight, and the hinder margin with two upright emarginate lamellæ. *Column* green, with a long erect green subulate inflexed beak, and two deflexed setæ below the anther bed, green, curving outwards like tusks.

Catasetum Christyanum, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xvii., 588.

The subject of our present illustration belongs to a most peculiar family of Orchids, and one which is especially interesting to those who are fond of curiosities. "Take Cataseta into your stoves," observes Professor Reichenbach, "and you are pretty sure to become more or less bewitched, earlier or later." No doubt they are full of interest to the botanist, but they are not so useful for purposes of decoration, nor so attractive as objects of beauty as are many others of their race. Possibly, however, some of our readers may admire the peculiar forms and colours of this flower, more than the showy and bright shades we so often meet with among the infinitely varied genera of *Orchidaceæ*. It has been pointed out that the close affinity of this plant is with *Catasetum saccatum*, a Demerara species introduced in 1840. It is certainly a very remarkable Orchid, and our artist has made a very faithful representation of it from a specimen growing in the collection of Thomas Christy, Esq., Malvern House, Sydenham, after whom it is named, and who not only possesses many new and rare species, but also takes great interest in their cultivation. *Catasetum Christyanum* is a deciduous species, with fusiform stems growing about eight inches in height. It produces its flower-spikes from the base of these stems, on erect scapes bearing in each spike about half a dozen flowers. The sepals

and paler petals are of a dull purplish red, which is relieved by the green of the lip. The plants usually bloom during the autumn months, but we believe the blossoms do not last very long after they have expanded.

Mr. Christy has bloomed another variety of the same plant, with smaller and greener flowers, which has been called *C. Christyanum chlorops.*

We find the different species of *Catasetum* to thrive very well in the Cattleya house, if provided with fibrous peat and good drainage at the roots, and suspended from the roof of the structure in baskets. They must not receive too much water at any time, and when their growth is completed they should only have just sufficient to keep them in a plump condition, as they have thick fleshy bulbs to be maintained fresh and healthy during their resting season.

Lælia superbiens.—We received from A. H. Smee, Esq., the Grange, Carshalton. a fine spike of flowers of this noble Orchid, forming in itself a most beautiful bouquet, the sepals and petals were of a rosy pink, the lip dark rose colour, with the throat of a primrose-yellow, veined with rosy purple, the upper part dark rose. It is altogether a charming winter-blooming species, but it is seldom seen. Mr. Smee is a great lover of Orchids, and is beginning to make a collection, in which already some rare species appear. He is trying experiments in their cultivation, and we are inclined to think that many plants will succeed under his treatment. The house is a very peculiar one; we have not seen one like it before. It is a long house, and in it there are different temperatures kept up, so that the different Orchids can be grown in the same house. Many plants were in bloom when we saw the collection in January last. The place is a very interesting one, and in the summer must be very charming on account of the great variety of Ferns and other plants that are grown there, almost all kinds of plants being cultivated. The garden must be a source of great enjoyment to the owners, as both Mr. and Mrs. Smee take much interest in their Orchids and other plants.—B. S. W.

Cattleya Trianæ Russelliana.—We were highly delighted to see this old favourite the other day at Baron Schröder's, where it was flowering profusely. The plant was in a fourteen-inch pot, and had as many as eight spikes, bearing in all sixteen flowers. In the same house were several other fine varieties of *C. Trianæ*. including *C. Trianæ Backhousiana*, but *C. Russelliana* was a long way in advance of anything there represented, in fact there is no doubt it is the finest variety of the dark-lipped section of *C. Trianæ* at present known. The lip of this variety is two inches across, and the colour, which is well carried back into the throat, is a most intense crimson-magenta. There is no margin of a lighter tint as in many of the other varieties, but the rich colour is as dark at the margin as in the centre. In addition to this the flowers are of great substance.—H. W.

CATTLEYA PURPURATA QUEEN.

CATTLEYA DOWIANA AUREA.

[Plate 84.]

Native of Colombia.

Epiphytal. *Stems* stout, clavate, furrowed, eight to ten inches high, monophyllous. *Leaves* evergreen, broadly oblong, obtuse, coriaceous, nearly a foot long. *Scape* terminal, about four-flowered, emerging from a compressed bluntish leafy spathe. *Flowers* very large, about six inches across and seven inches deep, with a superbly-coloured lip; *sepals* linear-lanceolate, plane, recurved at the tip, four inches long and about three-fourths of an inch wide, the dorsal one somewhat shorter and broader, all pale or primrose-yellow; *petals* ovate, apiculate, about three inches long and two and a-half inches broad, of the same colour as the sepals; *lip* obcordate, very large, four inches long and nearly three inches wide, obscurely three-lobed: lateral lobes erect, and meeting over the column, purple-crimson, closely veined with deep golden-yellow: front lobe very large, deeply emarginate, with the edge undulated, closely and finely crisped, rich velvety purple-crimson throughout, with about three golden lines down the centre, extending to within about one-third of the apex, from the outer of which branch off curving towards the margin a close series of golden reticulations, the sides being also marked by irregular blotches of gold. *Column* pale yellow, clavate, curved down, and almost covered by the lateral lobes of the lip.

Cattleya Dowiana aurea, *supra.*

Cattleya aurea, *Linden, Catalogue* (1872); *Id. L'Illustration Horticole,* 1881. 80.

The species of *Cattleya* are great favourites with all growers of the gorgeous race of Orchids. It is no less gratifying than surprising to see the many new forms that are being brought home by our energetic collectors, and great praise is due to them for their indefatigable exertions in this matter. There is no doubt that the Cattleyas rank amongst the richest-coloured of the genera of Orchids, and many of them even when not in blossom, if well grown, form attractive specimens, their foliage being of a beautiful dark green and their growth compact.

The plant we now illustrate is one of the most distinct and beautiful of the family. Our drawing was taken from a fine specimen in the grand collection of R. P. Percival, Esq., Clevelands, Birkdale, Southport, who has one of the largest and best grown collections of Cattleyas to be found; many of his plants have been imported within the last few years, and are wonderfully well grown, as, indeed, will appear when the number of flower sheaths showing on the different specimens is stated; thus, of *Cattleya Mendelii* there are 80, of *C. Mossiæ* 250, of *C. Trianæ* 369, and many others. We may add that a lesson may be learnt from Mr. Percival and his gardener respecting the growth of the Cattleyas. No doubt

Southport has great advantages over some other districts as regards purity of atmosphere and abundance of light and fresh air, but there are many persons having houses of the same kind, and a position equally advantageous, who would not obtain the same results. The rule we always lay down for the cultivation of these plants is to secure for them all the bright light possible. The only way to be successful in growing them is to give them plenty of light, air, and moisture in their growing season; and even in their resting season they require all the available light. There is no doubt that the main reason why these plants are grown so well is that Mr. Percival perseveres in getting to know the wants of the various species, many of which require treatment differing from their fellows, some, for example, liking more moisture than others, while others require more heat. All this may be learned by studying the altitudes to which the plants ascend in their native country—information which is to be obtained partly by reading, and partly from collectors and growers. There are many other Orchids grown in the collection besides Cattleyas, and Mr. Percival is building separate houses for the different classes—houses constructed of good size, and so that they afford plenty of air and light. Small houses suit Odontoglots, but Cattleyas require more room.

Cattleya Dowiana aurea is an evergreen plant, with clavate stems about eight inches in height, bearing broad dark green foliage, it being after the style of *C. gigas* in its growth. It comes from a different country from *C. Dowiana*, which is a Costa Rica species, but is so much like it that we cannot separate the two, the chief difference being in the colour of the flowers, which in the variety *aurea* is of a lighter yellow than in the type. There is a wonderfully fine illustration of *C. Dowiana* in Warner's *Select Orchidaceous Plants*, series 2, t. 27, which was taken from one of the finest plants of that species which we have yet seen. In *C. Dowiana aurea* the sepals and petals are of a primrose-yellow, while the broad lip is of a fine magenta, richly veined and blotched with golden-yellow. It is altogether a charming flower, blooming during the summer and autumn, according as it makes its growth, the flowers being produced before the growth is completed. They last three weeks or more in beauty if they are kept free from damp; if, therefore, they are placed in a dry warm house they will keep fresh until the last, for it is dampness which is the cause why these and other Orchid flowers often become spotted with decay. It is better to have a flowering house for those plants which are in blossom.

We find this variety requires the heat of the Cattleya house, and should be grown close to the light, being planted in good fibrous peat, with abundant drainage, so that a good supply of moisture at the roots may be given without risk during the growing season. When the plants are at rest a more limited supply will suffice. The plants should be suspended from the roof of the Orchid house.

J. Nugent Fitch del et lith

J. Nugent Fitch imp.

ODONTOGLOSSUM HEBRAICUM LINEOLIGERUM.

ODONTOGLOSSUM HEBRAICUM LINEOLIGERUM.

[Plate 85.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* elongate-ovate, compressed, upwards of two inches in height, pale green, brownish in age. *Leaves*, one or two springing from the apex of the pseudobulb, and frequently with a smaller one from its base, ligulate-oblong acute, nine inches to a foot in length, bright green. *Scape* supporting a dense elongated raceme of elegant flowers, radical, that is springing from the base of the pseudobulb. *Flowers* large, upwards of three inches in breadth and depth, the ground colour at first yellow, afterwards changing to creamy white, and freely spotted with purplish crimson; *sepals* lanceolate, attenuately acuminated, pale yellow, marked thickly on the lower half with deep purplish crimson, in bars and elongated blotches, which are sometimes confluent, the edges slightly wavy; *petals* similar in size, form, colour, and marking; *lip* elongate-triangular, or narrrowing from a broad base to the acuminate apex, toothed and undulated at the margin, pale yellow, deeper at the base, where there are placed a pair of prominent divergent crests, very sparingly spotted with the same colour as the sepals. *Column* arcuate, club-shaped, with the wings toothed.

Odontoglossum hebraicum lineoligerum, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xix., 44.

This beautiful plant was first flowered by Charles Winn, Esq., of the Uplands, Selly Hill, near Birmingham, and was by him submitted to Professor Reichenbach, who gave it the name here adopted. It has also been flowered by Mr. Cypher, of Cheltenham, who has kindly forwarded one of its pseudobulbs for description, and from whom we learn that while on the imported bulbs two leaves were developed, the bulbs formed in this country have as yet only borne a single leaf. It is a very distinct variety, and will make a charming companion to the already famous *Odontoglossum hebraicum*, of which but few specimens have yet been introduced into our Orchid-houses. They will form welcome associates of the better forms of *O. Alexandræ*, which are among the most useful of all Orchids for decorative purposes, and of the best of which we hope to submit to our subscribers at some future time a series of authenticated figures. Among them are to be found some plants bearing pure white flowers, while in others the blossoms are beautifully spotted with crimson and reddish brown, or have the sepals and petals suffused with a delicate rose colour. Mr. Winn, in whose fine collection the plant now illustrated was bloomed, has a very choice lot of these cool Odontoglots, which are well cultivated by his gardener, Mr. Shields.

There is no doubt that under good treatment the Odontoglots requiring what is called cool treatment are among the most accommodating of Orchids for the amateur, as they take but little room and require but a small amount of heat. Moreover, they thrive well in the suburbs of our smoky cities and towns, such as Birmingham and Manchester, or even in the cities themselves, if a small well-appointed house can be provided for their accommodation; for as they will do well without much sun, the back of a north wall will suit them well, provided they get plenty of light and air, while the fire-heat required in growing them forms but a small item of expense. There are besides many cool Orchids of other genera that may be grown in the same way, many of which may be purchased at a very small cost.

This interesting Odontoglossum is a compact-growing plant, like the type, and appears to be a free bloomer. The flowers, as we learn from Mr. Winn, open of a pale yellow, and are richly spotted and barred with purple-crimson, the lip also being pale yellow, and spotted, though in a less degree, with purple-crimson, but after about two days the ground colour changes to creamy white. They remain for a long time in a fresh state if kept from the damp. The plant requires the same treatment as *Odontoglossum hebraicum* and *O. Alexandræ*. We find rough fibrous peat, with good drainage, to suit them all well; a little broken charcoal and crocks mixed with the peat being of great benefit to them. It must be borne in mind that they must not be potted too firmly, as their roots differ from those of hard-wooded plants, which require that kind of potting. With these, on the other hand, the more porous the soil is kept the better, since they require a good deal of water about their roots at most times of the year, and it then passes away more freely. Another important item in their treatment is to raise the plant one or two inches above the rim of the pot. A little sphagnum moss placed on the top of the peat is beneficial to them, if it can be kept in a growing condition, as it maintains a nice moisture about the plant. If the moss should become decayed it must be removed, and some fresh living sphagnum applied. The plants will grow without the moss, but we prefer to use it. Avoid overpotting, which is often detrimental to them, for they do not require too much of the potting material about them; the pot should, in fact, be just large enough to hold the plant, and to admit a small quantity of the material being placed around it. A temperature of 45° to 50° in winter, and from 50° to 65° in summer, suits the Odontoglots of the *Alexandræ* section. In summer, indeed, they can scarely be kept too cool.

CYPRIPEDIUM PARISH

CYPRIPEDIUM PARISHII.

[Plate 86.]

Native of Moulmein.

Epiphytal. *Stem* short, erect, leafy. *Leaves* coriaceous, loriform, eight to ten inches long, and two inches broad, channelled and equitant at the base, obliquely obtuse and bifid at the apex, distichous, deep full green. *Scape* stout, erect, densely hairy, green, two feet long or upwards, five to six-flowered, each flower issuing from a semi-amplexicaul boat-shaped green, ovate, acute, glabrous bract, ciliated at the tip, the lower ones larger. *Flowers* singular in their conformation, not brilliant in colour, but pleasing in character, and long enduring; *dorsal sepal* one and a half inch long, erect, ovate-oblong acute, somewhat keeled, the sides revolute near the base, giving it the appearance of being clawed, the tip somewhat recurved, greenish straw-colour tinged with purple; *lateral sepals* connate, greener, the back marked with two distinct green keels meeting at the point; *petals* narrowly strap-shaped, widest below, and thence tapering to the point, four inches long, whitish green at the base, with scattered black spots, and a purple edge, which widens upwards till about half the length, when they become wholly of a glossy purple on both sides, twisted, the margin having here and there a black hairy wart; *lip* one and a half inch long, the basal half narrowed from the infolding of the edges, deeply stained outside with purple, spotted with purple within, and furnished with purple hairs directed backwards, the pouch oblong, blunt, with an expanded mouth, and two erect ear-like angles projecting upwards and outwards, pale green, freely stained with purple. *Staminode* large, depressed, obovate, bifid, with a blunt spur near the base, green, whitish at the edge, hairy.

Cypripedium Parishii, *Reichenbach fil.*, in *Flora*, 1869, 322; *Id.* in *Gardeners' Chronicle*, 1869, 814, with a woodcut; *Hooker fil.*, *Botanical Magazine*, t. 5791; *Williams, Orchid Grower's Manual*, 5 ed., 156.

The genus *Cypripedium* is now an extensive family of Orchids in which many new species and varieties are constantly appearing, some of them importations, but many of them the results of the well-applied skill of the hybridiser, through whose agency some really good and interesting additions to the older kinds have been, and are being made. It forms a most useful group of Orchids, most of them being of easy cultivation, and the flowers lasting a long time if due care is taken of them. Some Orchid growers discard them because of the stiff and formal outlines of their flowers. That character certainly does not apply to the Moulmein species we now introduce to our readers, as it is of a singularly graceful appearance, as may be seen from our sketch. The illustration was taken from a fine spike that was forwarded to us by A. Paul, Esq., Gilmore Place, Edinburgh, a gentleman who has a very good collection, and is one of those amateurs who are fond of, and takes a personal

interest in, their plants. Mr. Paul has exhibited some well-grown specimens at the Edinburgh shows during the past few years, and has taken some of the highest honours.

Cypripedium Parishii was discovered and introduced by the Rev. C. Parish, after whom Professor Reichenbach has named it; most of the plants originally collected, with many other Orchidic rarities, being, it would appear, destroyed by the unruly elephants, who threw off their loads, and trampled them under foot. It is an evergreen herbaceous plant, of good habit, with deep green foliage, about a foot in length. The flower-spike proceeds from the centre of the young growths when nearly completed, and bears several flowers, sometimes as many as six, the sepals being broad and greenish like the lip, and the petals long, undulated, greenish white at the base, the upper portion deep purple, and the margin furnished with hairy warts. It blooms during the summer and autumn months, according as the completion of its growth may take place earlier or later in the season; and the blossoms last for several weeks in perfection.

The plant thrives when grown in the East India house. We have also found it to do well at the warmest end of the Cattleya house. It does best when grown in a pot, with good fibrous peat or good loam, mixed with lumps of charcoal, and with thorough drainage. It requires a liberal supply of water during the growing season, and when at rest should not be kept dry, since it has no thick fleshy bulbs to support the foliage, and, moreover, it is nearly always growing.

This species may be propagated by dividing the plant after it has started into growth, leaving one old-established crown at the back of the young growth; place the divided parts in small pots until they are established, and then remove them into larger ones as they require it, but avoid overpotting them.

VANDA TRICOLOR PLANILABRIS

VANDA TRICOLOR PLANILABRIS.

[Plate 87.]

Native of Java.

Epiphytal. *Stem* erect, leafy, as in the type. *Leaves* distichous, ligulate, oblique at the apex, of a very dark green colour. *Scapes* lateral, erect, green, bearing a dense raceme of eight to twelve flowers, of which the pedicels are white. *Flowers* very stout in texture, and beautifully coloured, white exteriorly; *sepals* leathery, roundish-obovate, clawed or cuneately narrowed at the base, citron-yellow, with crowded reddish-brown spots, longitudinally arranged, especially in the median parts, more irregular but with the longitudinal tendency near the margin; *petals* of similar form and substance, rather narrower at the base, marked with linear blotches on the claw-like portion, and with rounder and more spot-like markings on the broader surface; *lip* contracted in the middle, having two short white rounded lateral lobes at the base, and a large oblong front lobe, with projecting auricles above the purple-striped claw, flat, with the broader and bluntly rounded apex emarginate, the basal portion deep magenta-purple, the upper portion beyond the contraction a paler tint of the same, and the disk marked with five white lines, of which the central one is longer, and extends half-way to the emarginate apex. *Column* thick, white.

Vanda tricolor planilabris, *Lindley, Paxton's Flower Garden,* ii., t. 42, in note; *Id. Folia Orchidacea,* art. *Vanda,* No. 10.

This species is one of the most beautiful of the Vandas, and comprises many varieties which differ much both in form and colour—sufficiently so, we think, to justify the adoption of distinctive names; but the botanists tell us that we must take them as varieties of *Vanda tricolor*, and distinguish them from each other as best we may. That which we are now about to figure and describe, is very distinct in the form of its flowers, as well as in colour, from the typical *V. tricolor*, represented at Plate 77. The plant from which our drawing was taken is a very fine specimen in the collection of Joseph Broome, Esq., Woodlawn, Didsbury, near Manchester, who is not only a great lover of plants, but also one who does much for the general advancement of the interests of horticulture.

Vanda tricolor planilabris is a plant having a stately habit of growth; it is furnished with dark green foliage, and produces its flower-spikes on each side of the plant, from the axils of the two-ranked leaves, at different times of the year, usually bearing from seven to ten flowers on a spike. The sepals and petals are yellow, thickly marked with rich brown spots; the lip is rose colour, margined with purplish mauve, and striped with chocolate-brown. It continues for at least six weeks in perfection.

The plant requires the same treatment as that recommended for the allied plants under Plate 77, where a full account of these Vandas will be found.

Odontoglossum lyroglossum.—We received a fine spike of flowers of this rare Odontoglossum from E. Harvey, Esq., Aigburth, Liverpool, accompanied by a drawing of the same from the pencil of Miss Harvey—which latter we have returned, and for the use of which we beg to tender her our best thanks. It is a very pretty and interesting species. The spike bore eight blossoms, of which the sepals and petals were of a pale yellow, spotted with chestnut-brown, and the lip also yellow, with large brown spots in the centre.

We had the opportunity of seeing Mr. Harvey's collection of Orchids when at Liverpool in December last, when we found many of them in bloom, and among them some rare species, as well as good varieties of Cattleyas, Dendrobes, Lælias, and other genera. There was besides a fine assortment of Odontoglossums, some of which—good ones—were in blossom, and many others were showing flower-spikes. They were in excellent health, and made a nice display. In addition to the Orchids we found there a grand collection of Hardy Alpine Plants, which are well cared for, and in the spring and summer months must form a very interesting feature of the garden.—B. S. W.

Phalænopsis Mariæ, *Burbidge* [Plate 80.]—We have been requested by Professor Reichenbach to mention that there exists some misapprehension as to the above quoted name, which was not given by him, as stated in the text which accompanies Plate 80, but was used by Mr. Burbidge, who dedicated the plant to his wife on the very spot where he found it, in a little Sondaic island. "I have, indeed," he adds, "accepted the name, but of course left the publication to the author; had I named the plant, I would have published it in the *Gardeners' Chronicle*. It is painful to me to write thus, but to justify myself I must do so; for now-a-days one is frequently worried with prescriptions how some unknown plant must be named provided it be new, and I have always declined to name plants in honour of ladies whom I have never seen, and who do not, so far as I know, stand in any special relation to plants."

CATTLEYA LABIATA.

[Plate 88.]

Native of Brazil.

Epiphytal. *Stems* (pseudobulbs) short, club-shaped, furrowed when old, invested by greyish membraneous sheaths, one-leaved. *Leaves* coriaceous, oblong obtuse, of a dark green. *Scape* issuing from an elongate oblong compressed double sheath, of a paler green than the leaves, *Flowers* two to five—usually about three—on each spike, large though not equalling in size many of the forms of *C. Mossiæ*, the lip very richly coloured; *sepals* lanceolate, acute, plane and entire at the margin, recurved at the apex, of a very pale delicate tint of rosy blush; *petals* of the same colour, but three times as broad, ovate, bluntish at the apex, the margin undulated; *lip* obovate, with the two sides connivent over the column, of the same delicate blush tint as the sepals and petals, the front part beyond the tubulose portion expanded (about two inches broad and long), rounded, deeply emarginate, almost wholly of a very rich lustrous deep magenta-purple, a broad bar of which is continued towards the base down the centre of the tube, and on each side of this bar at the mouth of the tube is a roundish-oblong patch of creamy yellow, which becomes paler as it spreads towards the edge; the margin neatly and densely frilled, and having at the extreme edge a narrow border of pale rosy blush, which is continued around the whole of the richly-coloured front lobe. *Column* clavate, semi-terete, shorter than the tube.

Cattleya labiata, *Lindley, Collectanea Botanica*, t. 33; *Id., Genera and Species of Orchidaceous Plants*, 116; *Id., Botanical Register*, t. 1859; *Id., Paxton's Flower Garden*, t. 24 (varieties); *Hooker, Exotic Flora*, t. 157; *Id., Botanical Magazine*, t. 3998; *Loddiges, Botanical Cabinet*, t. 1956; *Paxton's Magazine of Botany*, iv., 121; *Van Houtte, Flore des Serres*, tt. 1893-4; *Jennings' Orchids*, t. 45; *Williams, Orchid Grower's Manual*, ed. 5, 122.

Epidendrum labiatum, *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 313 (var. *a. genuinum*).

This fine species has been known in England since 1818, and *Cattleya Loddigesii* excepted (originally grown as *Epidendrum violaceum*), was the first Cattleya introduced, and the type of the genus, which was named in compliment to W. Cattley, Esq., of Barnet. There are two or three varieties of the autumn-flowering *C. labiata*, the one having foliage of a light green, and the other of a darker green with the under side of the leaf also darker-coloured than in the first. It is the same in the case of *C.* (*labiata*) *Warnerii*, the sub-species named in honour of Mr. R. Warner, the two forms of which may be easily distinguished from the typical *C. labiata*, since they generally bloom in May and June. There are many wonderful sub varieties of *C. Warnerii*, both as regards the colour of the lip and the size of the flowers, and some of these have been sold by collectors as the true autumn-flowering

C. labiata, though that is easily distinguished from *C. Warnerii* by those who really know the two plants.

We have been cultivating Orchids for nearly forty years, and have never known the original *C. labiata* to be imported during that period. It is this that makes it so scarce, and causes it to fetch the high prices that it does. Another reason is, that it blossoms when few Cattleyas are in flower, *i.e.*, in October and November, and so every grower desires to possess it. We remember many years ago seeing plants of this species two feet in diameter in the collection of R. Hanbury, Esq., The Poles, near Ware. Mr. Hanbury had a wonderful specimen in his first collection, which went to Germany. Many other such plants were to be seen in those days; and it would appear that these plants have been divided, and distributed among growers. It is greatly to be regretted that our collectors do not again discover its habitat.

The specimen we now illustrate is from a well-grown plant in the fine collection of H. Gaskell, Esq., Woolton Wood, Woolton, Liverpool, where it bloomed with five very fine flowers on a spike. A most wonderful and lovely spike it was, and we regret not being able to depict it full size, in order to show off its beauty.

There is another variety of *C. labiata* that blooms in August, and is very distinct from the old variety referred to above both in the colour of its flowers and its foliage; it is called *C. labiata pallida*. There are two very fine plants of this variety in the collection of the Comte de Germany, Chateau de Gouville, near Rouen, in France; each plant has over a hundred bulbs—a grand sight when in bloom.

Cattleya labiata is an evergreen plant, and is also one of the most free-flowering Cattleyas we have in cultivation, since every good growth brings its blossoms, a strong one, producing a spike of five flowers from a double sheath. The individual flowers are of large size, the sepals and petals pale soft rosy-pink, the lip rich magenta, margined with light rosy-pink, and the sides of the throat orange-yellow; they last in their freshness and beauty for some three or four weeks. This species requires the same treatment as *C. Mossiæ*, that is, to be planted in good fibrous peat, and to have perfect drainage; it will grow either in a pot or in a basket, and requires a moderate supply of water during the growing season, which is in the spring and summer months. In winter, when the plants are at rest, they merely require sufficient moisture to keep the bulbs and leaves in a plump state; but it is very detrimental to Cattleyas to keep them too dry, as this often causes them to shrivel and turn yellow, and when this occurs it takes a long time to recover their healthy condition. We do not agree with over-watering or over-potting Cattleyas—both practices are extremely dangerous, especially the use of too much material about the roots, which becomes soddened by the necessary moisture, and causes the roots to decay. If the plants should fall into this misfortune, they should be completely shaken out of the material used, their roots well washed, and then be potted in crocks until they make fresh roots. They must be kept in a shady place during the continuance of this *régime*, and until they appear to have regained their vigour, after which they may be allowed all the light obtainable.

EULOPHIA GUINEENSIS PURPURATA.

[Plate 89.]

Native of West Tropical Africa.

Terrestrial. *Pseudobulbs* short, roundish-ovate, marked near the apex with one or two annulate scars, indicating the bases of former leaves. *Leaves* with an oblong-oblanceolate acuminate blade six inches long, narrowed below into a petiole of about half the length, somewhat plicate. *Scape* arising from the base of the pseudobulb, twelve to fifteen inches high, including the *raceme* of seven to ten flowers, furnished at intervals with pale brown sheathing bracts, which become smaller upwards. *Flowers* pedicellate, spurred, remarkable for their narrow dark sepals and petals and their broad highly-coloured lip; *sepals* about an inch long, linear acuminate, deep rosy purple, the lateral ones spreading horizontally; *petals* directed upwards between the erect dorsal and the spreading lateral sepals, and similar to them in size, form, and colour; *lip* three-lobed, the front lobe roundish-ovate pointed, about an inch and a quarter in length and in breadth, wavy at the margin, of a rich bright magenta, traversed by deep crimson flabellate veins, which become deep rosy purple as they converge towards the base when they suddenly stop, the extreme base being white; the side lobes are short and blunt, of a pale blush. *Spur* slender, deep purple, three-fourths of an inch long. *Column* bent forward, rosy purple, slightly keeled at the back.

Eulophia guineensis purpurata, *Reichenbach fil.*, in *Kotschy's Plantæ Binderianæ Niloticæ Æthiopiceæ*, 3; *Kotschy, Plantæ Tinneanæ*, 63.

Eulophia is a small genus of Orchids of which a few species are known in cultivation. The one we now describe is a most beautiful and distinct variety of a species which was cultivated many years since, and one that everyone may admire. Our drawing was taken from a specimen in the grand collection of Sir Trevor Lawrence, Bart., M.P., Burford Lodge, Dorking. It is a very rare plant, and is most difficult to import from its native habitats. It is also supposed to be difficult to establish, but it is so rare that few persons have had the opportunity to try it. Sir Trevor Lawrence manages to cultivate it very successfully, and we have also seen it well grown in the collection of H. Shaw, Esq., of Buxton, who has also flowered it. We have heard of very few other plants, and, therefore, we should like to see a good importation of it, as many cultivators would, we are quite sure, be glad to possess such a gem.

Eulophia guineensis purpurata produces small oval-shaped pseudobulbs, and has light green plicate foliage, ten inches or a foot in height. The flower stem is produced from the base of the bulb with the young growths, and reaches to a

height of eighteen inches, terminating in a spike of ten or more flowers. The sepals and petals are brownish purple, veined with a darker brown, and the lip is magenta-rose, veined with a darker magenta, the throat being white. It blooms in September and October.

Being a terrestrial Orchid it is best grown in a pot, with good fibrous loam, leaf soil, and sharp river sand; a little charcoal should be mixed with the soil, and good drainage is essential, since a moderate supply of water during the growing season is needed. When at rest only just enough water should be given to keep the bulbs plump. We have found it do well in the Cattleya house, placed as near the light as possible, but shaded from the hot sun. The leaves being thin they are apt to scorch. It is propagated by dividing the pseudobulbs, leaving one old pseudobulb along with the new one.

Odontoglossum triumphans.—We have received, through the post, from J. Gordon, Esq., Aikenhead, Cathcart, near Glasgow, flowers of two distinct varieties of this beautiful species, varying both in size and in hue. One variety was of large size, and very bright in colour, the sepals and petals being of a clear golden yellow, barred and spotted with brownish-crimson, and the lip white, with the throat yellow, and the apical portion brownish-crimson. The other variety was smaller, and as Mr. T. Hogg, the gardener, informs us, was from a pseudobulb with two spikes bearing twenty-nine expanded flowers; in this the sepals and petals were nearly all brownish-crimson, with very little golden yellow, the lip white, with a large irregular blotch of brownish-crimson on the antical portion.—B. S. W.

ODONTOGLOSSUM CORADINEI.

[Plate 90.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* elongate-ovate, compressed, somewhat ribbed, usually diphyllous. *Leaves* narrow, ligulate, or ligulate-oblong, acuminate, of a deep green colour, an extra one or more sometimes sheathing the base of the pseudobulbs. *Scape* radical, with small triangular bracts supporting a slender spreading raceme of nine to ten flowers, which forms a neat spike of about a foot in length. *Flowers* stellate, somewhat over three inches in breadth and length; *sepals* lanceolate, tapered to a long narrow point, pale yellow, with about two large irregular sometimes broken spots of chestnut-brown at some distance from the base; *petals* similar in form and colour, one inch and a half long, marked with a large often bipartite spot at a considerable distance from and one or two smaller spots nearer the base; *lip* shorter than the petals, obovate-oblong, apiculate, contracted in the middle, paler yellow, with a squarish spot of chestnut-brown on the middle or contracted portion, and a few spots or blotches near the base, where there is a crest of two upcurved horns. *Column* whitish, semiterete, with brown blotches in the sub-rhomboid wings, which are denticulate on the outer edge.

Odontoglossum Coradinei, *Reichenbach fil.*, in *Gardeners' Chronicle*, 1872, 1068, fig. 251; *Id. Xenia Orchidacea*, ii. 208, t. 192, figs. 1-4.

This is one of the numerous imported forms of Odontoglots which are supposed to be natural hybrids, many of which are so beautiful and so much sought after, becoming greater favourites as time passes. We are by no means surprised at the growing taste for this charming Orchidic genus, since the plants are of easy culture, require nothing but cool treatment, and their flowers, which are of long duration, are borne on graceful spikes.

The form we now represent is distinct in colour, and comes in as a good contrast with the varieties of *Odontoglossum Alexandræ* (*crispum*)—a contrast which it should always be sought to establish in making a collection, in order to produce a picturesque effect in the house, since the different varieties when associated show each other off to advantage.

The plant was found in New Grenada by the collectors Chesterton and Coradine, and was named by request of the former (who has lately died) in honour of his companion in travel, It appears to be a hybrid between *Odontoglossum triumphans* and some of the *O. odoratum* group, and would seem to be somewhat variable in character. The sketch we publish was taken from a plant in the collection of Robert Warner, Esq., Broomfield, near Chelmsford, who has the largest and finest collection of Odontoglots we have seen, extending to about twelve thousand plants.

In this collection we have seen many hundred spikes of *O. Alexandræ* (*crispum*)—and other kinds in bloom at the same time, and, arranged as they were in two long houses, the sight was a glorious one, never to be forgotten. A similar magnificent display is obtained every year.

Odontoglossum Coradinei, which is very rare, forms a compact-growing plant, furnished with lively green foliage, and producing its flowers, about nine in number, on a drooping spike; the sepals and petals are primrose colour, spotted with a warm brown, and the lip is primrose, with an oblong spot of brown in the centre. The plant blooms during winter, and lasts for several weeks in full beauty. It requires to be grown in the cool house, and should have the same temperature and treatment as *O. Alexandræ*.

Mr. Lee's Vandas.—We were favoured recently with a box of Orchid flowers from W. Lee, Esq., Downside, Leatherhead. The box contained twenty-one grand spikes of varieties of *Vanda suavis* and *V. tricolor*, amongst which were some of the finest forms we have ever seen. It was, indeed, a feast of Vandas to have so many fine varieties side by side. Amongst the varieties of *V. tricolor* were many forms—from a pale variety with a whitish ground up to the most superbly marked one of the series, which Mr. Lee calls the "Downside" variety. The markings of this gem are very rich and distinct, the spots being well defined, of a bright chestnut-brown, and the lips a rich magenta. *V. tricolor Patersoni* and *V. tricolor superba* were quite in the shade by the side of this great beauty. *V. tricolor Warnerii* was also grand, but of a different type to the last-mentioned plant, having rosy margins around the sepals and petals; this plant is well figured in Warner's *Select Orchidaceous Plants*.

Of *Vanda suavis* there were some magnificent forms, one, marked Lee's variety, being especially fine; this had thirteen flowers on the spike; the sepals and petals were of fine form, with distinct pale brownish-crimson spots. In some cases the spotting of this variety is very peculiar, especially on the lower parts of the sepals and petals, where the spots or stripes are from half an inch to three-fourths of an inch long, rendering the markings very distinct.

Accompanying the Vandas was a fine variety of *Cattleya Mendelii*, called *Jamesiana*, with rose-coloured sepals and petals, and a broad well-fringed lip, two inches across, of a bright magenta, with the throat yellow, streaked with dull purple; the petals are distinctly blotched with bright magenta at the apex.—B. S. W.

J. Nugent Fitch. del. et lith

PHAJUS

J. Nugent Fitch. imp.

PHAIUS TUBERCULOSUS.

[Plate 91.]

Native of Madagascar.

Epiphytal. *Stems* (pseudobulbs) fusiform or sub-clavate jointed, dark green, annularly marked by the pallid bases of the leaf-sheaths. *Leaves* oblong-acuminate, about a foot long, plicate, narrowed below, the base again enlarged so as to clasp the stems. *Scape* produced with the young growth, green, below bearing lanceolate imbricated bracts, and terminating in an erect raceme of six or more flowers. *Flowers* spreading, two and a half inches across, of singular form; *sepals* ovate-acuminate, stoutish, pure white; *petals* of the same colour and texture as the sepals, but rather broader and more oblong; *lip* obliquely funnel-shaped at the base, with a blunt chin projecting upwards, three-lobed; the two *basal lobes* large, suborbicular, meeting the column, yellow, thickly blotched with irregular spots and dots of a dull crimson, producing a bronzy effect, furnished with scattered hairs on the surface, wavy at the edge; *front lobe* smaller, roundish-emarginate or subcordate, wavy, white, with rosy purple marginal spots, closely frilled; *disk* yellowish white, with three deep orange-yellow crests or ridges towards the front, the crests bluntly toothed and wavy along the upper edge, the central one forked about the middle; near the base, a short distance from the column, is a small tuft of pale sulphur capitate hairs. *Column* slender, incurved, club-shaped, white, tinted with purple in front.

Phaius tuberculosus, *Blume, Museum Botanicum Lugduno-Batavum*, ii., 181; *Id., Orchidées de l'Archipel Indien et du Japon*, 13, t. ii. B.; *Gardeners' Chronicle*, N.S., xv., 341, fig. 67; *Reichenbach fil.*, in *Gardeners' Chronicle*, N.S., xv., 428.

Limodorum tuberculosum, *Du Petit-Thouars, Orchidées recueillies sur les trois Iles Australe d'Afrique*, t. 31.

Bletia tuberculosa, *Sprengel, Systema Plantarum*, iii., 744; *Lindley, Genera and Species of Orchidaceous Plants*, 123.

The plant we are now about to describe, and of which a figure accompanies these remarks, is one of the most beautiful and distinct yet known, one, moreover, which has only bloomed in few collections. It is a new introduction from Madagascar, and as yet is a very rare plant, being difficult to import and also to establish, which is much to be regretted on account of its beauty. Our plate was taken from a well-grown specimen in the fine collection of Baron Schröder, of The Dell, Staines, where, under the care of Mr. Ballantyne, the plant is very successfully managed. Sir Trevor Lawrence, Bart., M.P., has also been fortunate in flowering it, and, indeed, it was first exhibited by him.

Phaius tuberculosus produces short fusiform fleshy stems, from which proceed the new growths, consisting of a tuft of plicate leaves, of light green colour, and with them the flower spike, which is erect, and has as yet only borne about half-a-dozen flowers on each. It blooms during January and February, and is difficult to establish and cultivate. As the plant gets better understood it may be found more easy to import, and other growers may then be more successful. Many of the imported plants have been lost through want of knowledge as to packing and other requirements of travel; there is little doubt that our collectors will be more successful as to these matters, and then we may expect the plants to reach Europe in safety. We know of many Orchids that were once considered difficult to import which are now obtained safely in quantities through being sent at the proper season. If plant collectors would study this point they would be very much more successful than they have hitherto been. Of course it is difficult for one to be on the spot at the moment when the plants have matured their bulbs, and so as to get them to this country before they start into growth, but if this could be done there would be more chance of saving them.

There is another important point affecting cultivation, namely, that more complete information where and how the plants are found in their native habitats should be obtained and furnished. A great deal of the success in the development of all these and other plants depends on their proper treatment as regards the temperature and the supply of moisture. If they are found in low-lying districts they require quite a different treatment to that of those which occur in high and mountainous districts.

Whenever we find a plant, as this is, difficult to cultivate, we should endeavour to find out which house suits it best; this may easily be done if we have different houses situate in different aspects, and even if there is but one house a great deal can be done by placing the plant in different positions in that house. If it does not succeed in one part it may do so in another, and should it happen that a plant is found to thrive well in a particular part, an endeavour should be made to keep it there during its season of growth, and should it be removed during the resting period let it be put back again the following season to make its growth. There is more than many growers imagine in this matter of setting plants in the places which they are found to like best. Some cultivators, because they have succeeded for a few years, think they can do as they please with a particular plant, but this is an error. We often meet with cases in which persons have grown their plants well for a few years, after which they go back. The cause is generally not far to seek. It may often be attributed to over watering, or to keeping the plants dry when they should have been moist, or to changing the temperature, or allowing the plants to get dirty. There are various other causes of non-success, such as acting on the advice of different persons, rushing suddenly into different modes of treatment, using different materials, or some other such-like practices. We have in our time seen many new schemes tried, and have to record that many of them have utterly failed.

DENDROBIUM FINDLEYANUM.

J.Nugent Fit

DENDROBIUM FINDLEYANUM.

[Plate 92.]

Native of Moulmein.

Epiphytal, *Stems* jointed, the joints oblong-pyriform, complanate, two inches long or more, the lower part of each internode slender, stalk-like, and invested by the leaf sheath, the upper end much thickened, and at length becoming more or less furrowed. *Leaves* linear oblong acute, three inches long, soon falling. *Peduncles* lateral, two-flowered, with small appressed bracts. *Flowers* rather large, three inches across, showy, the colours being clear and attractive; *sepals* lanceolate, recurved, the lateral ones somewhat broader, of a light purplish mauve colour, whitish towards the base; *petals* larger and more oblong, white at the base, and heavily tipped with pale purplish mauve; *lip* stilted, roundish-cordate, concave, the sides meeting over the column, white, slightly tipped with purple, the disk velvety, marked with a large roundish orange-yellow blotch, paler at the edges, the basal callus obscure. *Column* with two deep purple bands in front.

Dendrobium Findleyanum, *Parish and Reichenbach fil.*, in *Transactions of the Linnæan Society*, xxx., 149; *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., vii. 334; *Hooker fil.*, *Botanical Magazine*, t. 6438.

The Dendrobes form a large and splendid group of Orchids, in which may be found some of the finest examples of the Orchid family. The species we have now the pleasure to bring before our readers is of recent introduction, and is one of the most beautiful and distinct of the whole family, not only as regards its flowers, which are very attractive, but also on account of its very peculiar jointed stems, of which a better idea will be obtained from our illustration than from any minute description. The figure was taken from a beautiful plant grown in the large collection of J. T. Peacock, Esq., Sudbury House, Hammersmith, who is an enthusiastic collector and cultivator of plants, and has many houses filled with Orchids, which are doing well under the care of Mr. Vicary, the gardener.

Dendrobium Findleyanum is a free-growing plant, and its curiously knotted stems have a singular appearance. The blossoms are produced very freely; the sepals and petals are white, tipped with pale magenta, while the lip is white, with the apex rosy purple, and the throat or disk yellow. It flowers during March and April, and lasts for two or three weeks in beauty.

We find it do well in a pan or basket, suspended from the roof, in the East India house, where it can receive all the light possible, and be shaded slightly from the sun in summer. The material used about its roots must be rough peat and sphagnum moss. It needs a liberal supply of water during the summer season, and must be kept moist until it has completed its growth, when less water may be given, just sufficient to insure the plumpness of the stems.

Orchids at Sudbury House, Hammersmith, the Residence of J. T. Peacock, Esq. —The collection of Orchids grown by Mr. Peacock is truly surprising, as was the show of flower when we paid a visit to it in March last. There were then many hundreds of blooming Orchids, especially of *Phalænopsis*, of which there were in one house hundreds of flowers of the different species and varieties, the drooping spikes overhanging and mingling with each other, and presenting a striking picture, some being snowy white, and others of different shades of mauve colour; there were, moreover, some very good forms among them. In an adjoining house were some very fine plants of *Dendrobiums*, such as *D. Findleyanum*, *D. crassinode*, and *D. Wardianum*; also hundreds of flowers of *D. Freemanii*. In the same range of houses we saw a fine lot of *Odontoglossum vexillarium*, showing well for bloom. *O. Phalænopsis* was doing well, which we do not often see. Of *O. Roezlii* there were many fine plants in good health, as there were also of *O. Alexandræ* (*crispum*), of which a great number were in bloom. *Cattleya citrina* was well grown—better than we have seen it before; the plants were suspended from the roof. *Lycaste Skinneri*, of which we found a large lot in bloom, were producing very fine flowers. We were surprised to see such fine plants of *L. Skinneri alba* in blossom. Mr. Peacock has been very fortunate in flowering these from an importation, as it is a rare and chaste variety. In the next house were many hundreds of *Odontoglossum Alexandræ* and *O. Pescatorei*, and other kinds; many of them were in bloom, and among them were some good varieties.

We also noted some good East Indian Orchids, many plants of *Angræcum sesquipedale*, and other kinds. There was a fine collection of *Cattleyas* in a large span-roofed house, amongst which were some good forms of *C. Trianæ* in full bloom; also a grand lot of *Cymbidium eburneum* in flower, the white blossoms with the graceful green foliage having a good effect. There were several other houses filled with Orchids. If Mr. Peacock continues as he has begun, he will presently have the largest collection of these plants in the country. That this is likely to be the case we may presume, for we saw several other new houses intended for Orchids in the course of construction. Mr. Vicary, the excellent gardener, is one who takes great interest in the collection under his charge, and therefore we may expect that good results will be assured.—B. S. W.

CATTLEYA SCHOFIELDIANA.

CATTLEYA SCHOFIELDIANA.

[Plate 93.]

Native of Brazil.

Epiphytal. *Stems* (pseudobulbs) from one to one and a half foot long, slender, terete, slightly thickened near the top, jointed, the internodes nearly covered by whitish membranous sheaths, diphyllous. *Leaves* oblong obtuse, about six inches long and two inches wide, of a deep glossy green, shortly stalked, the stalks spotted behind with dull dark red. *Flowers* about two, large, six inches broad, and about the same in depth, very handsome, in the way of those of *Cattleya granulosa*; *sepals* ligulate-oblong, bluntly acute, the dorsal one over, the lateral ones rather under three inches long, nearly one inch broad, of an Indian or pale tawny yellow, having a flush of purple and a tinge of green, the whole spotted thickly with crimson-purple, the spots most numerous on the outer half of each lateral sepal; *petals* obovate, rounded at the apex, narrowed towards the base, about three inches long and one and a half inch broad, of the same colour as the sepals, the spots towards the edges coalescing in divergent, sometimes forked, lines, which run out to the margin; *lip* two and a half inches long, three-lobed, the lateral lobes whitish, large, obliquely ovate, meeting over the column, the middle lobe with a long narrow claw, and a small transversely reniform fimbriated blade, which, except at the pallid edges, is entirely covered by lamellæ and papulæ of the most beautiful magenta-purple, the claw-like portion having a dash of yellow in its ground colour. *Column* whitish, curved, hidden by the lateral lobes of the lip.

Cattleya Schofieldiana, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s. xviii., 808.

We have in cultivation many handsome species of *Cattleya*, but that now before us is very distinct from any we have previously seen, and is quite new to us. The growers of Orchids are all on the look-out for new species, especially such as are distinct. We are, therefore, glad to be able to bring such a beautiful and charming species as this, under the notice of our readers. There are, indeed, numerous other fine Cattleyas in cultivation, but many of them are much alike in form and colour. The present type is, however, distinct, and embraces but few forms, especially with blossoms of an equal size. Our illustration was taken from a well-grown specimen in the select collection of G. W. Law-Schofield, Esq., New-Hall-Hey, Rawtenstall, near Manchester, in whose honour it was named by Professor Reichenbach. This is the only plant of which we have any knowledge as existing in the country, and Mr. Schofield has been truly fortunate in introducing it.

Cattleya Schofieldiana is an evergreen species, with slender terete stems, each bearing two leaves, about five inches in length and two in breadth, of a dark green colour; the stems grow some eighteen inches in height. In its growth this

plant resembles *C. amethystoglossa* and *C. Leopoldii*, but it is not so robust. Mr. Wise, the gardener, grows it in rough fibrous peat, giving good drainage. Pot culture suits this class of Cattleyas best. They must be well elevated above the rim of the pot, so that the roots may run over the surface, as, when buried in the peat, if they get over-watered, they are apt to go rotten. A little charcoal placed on the top of the peat is advantageous, as the roots lay hold of it freely; and it is also desirable to mix a portion with the peat, as it renders it more porous, and allows the water to pass off more freely, thereby helping to keep the compost sweet. This latter is a matter of great importance to the plants, for Cattleyas, like many other Orchids, do not like the soil in which they are planted to set too closely together to the exclusion of fresh air from their roots. There is no doubt the access of fresh air keeps them in a more vigorous condition. In support of this it may be noted that in their native country they are found on trees, where they get a free circulation of air, their roots being merely sheltered by the small quantity of moss or decayed leaves from the trees which may collect about them, while many of them luxuriate with their roots suspended in the air.

This *Cattleya* is one of those which should always be kept plump in the stems and leaves, for if allowed to shrivel it will be found difficult to get them again into a plump healthy condition. Give all the light possible, so that the stems may be well ripened. A great deal of success depends upon the thorough maturation of the successive growths, for if they are weak or immature they will produce but puny results. The plants require the same temperature as *C. Trianæ*.

Cattleya Mossiæ.—We have lately received from De Barry Crawshay, Esq., Sevenoaks, flowers of a fine series of varieties of *Cattleya Mossiæ*. The flowers were all large and very richly marked, some of the colours being exceedingly distinct, and the lips very large.—B. S. W.

Dendrobium Dearei.—We were agreeably surprised to see this novelty exhibited by Sir T. Lawrence, Bart., at the Summer Show of the Royal Horticultural Society. The flowering bulb was two feet six inches high, and was furnished with two spikes of flowers. This species seems to differ from the *formosum* section of the genus, by throwing out lateral as well as terminal spikes. The flowers were about thirty in number, pure white, with a slight tinge of green in the throat. In shape they resemble those of *D. Jamesianum*, but they are somewhat smaller.—H. W.

Reich imp

ODONTOGLOSSUM ALEXANDRÆ GUTTATUM.

[Plate 94.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* ovate-oblong, compressed, green while young, becoming tinged with purple as they grow older, diphyllous, with one or two accessory ones from the base of the pseudobulbs, bright green. *Racemes* proceeding from the axils of the accessory leaves, drooping. *Flowers* crowded, white, beautifully spotted with bright chocolate-red, nearly four inches across; *sepals* lanceolate, crispy, white, with a few bold spots and blotches of chocolate-red about the middle part; *petals* broader and more wavy, with a solitary nearly central spot on each; *lip* oblong, subcordate at the base, much crisped at the margin, the apex recurved so as to produce an emarginate appearance, white, slightly dashed with yellow on the disk, where there are a few longitudinal lines and a series of radiate lines of light red-brown, and two divergent yellow crests, the margins half way down being marked by confluent blotches and a few largish spots both on the edge and on the surface towards the front. *Column* white, slightly spotted with brown.

Odontoglossum Alexandræ guttatum, *Hooker fil., Botanical Magazine*, t. 5697: *Williams, Orchid Grower's Manual*, 5 ed., 229.

There are many varieties of this charming Orchid with spotted flowers, differing in the size of the blossoms and in the colour and amount of the spotting, which are cultivated under different varietal names, but the representation of the one we have now the pleasure of illustrating will, we hope, be the means of inducing growers to range some of them as forms of *guttatum* instead of so greatly multiplying names, which becomes inconvenient. We know that some of them are more distinct from the type than others, but the fewer names we can use the more easy and satisfactory will it be both for growers and purchasers.

We are indebted to R. Smith, Esq., Brentham Park, Stirling, for the magnificent spike of flowers from which our plate was prepared. We much regret not to have been able to represent it of its full size and its natural branching habit, but our artist has given enough to show that it is one of the most beautiful of the many named varieties. There was a fine collection of Orchids at Brentham Park, which we regret to find is to be broken up on account of Mr. Smith's health.

Odontoglossum Alexandræ guttatum is a compact-growing plant, with lively green foliage, and it produces branching spikes furnished with many flowers. When well grown, as this plant was, by Mr. McLeod, the sepals and petals it will be seen are pure white, profusely spotted with bright chocolate-red, while the lip is white,

densely spotted with the same colour. It blooms at different times of the year, according to the maturation of its growth, and lasts for six weeks in perfection if the flowers are kept dry. Too much moisture causes them to spot, so that it is better, if possible, to move them when in flower to a drier house, but while under these altered conditions the soil should be kept moist, as the plants require a good supply of fluid about their roots to prevent them from shrivelling. The best plan is to cut off the spike of flowers and to place it in water, as when treated in this way it will last a long time. It requires the same treatment as *O. Alexandræ.*

Lord Rendlesham's Orchids.—We were recently favoured with a box from Rendlesham Hall, containing the following flowers:—*Lycaste Skinneri amabilis.* In this the flowers were very large, six and a half inches across, the petals two inches long, bright rosy crimson, the sepals pale blush, and the lip white, irregularly margined with bright crimson. *Lycaste Skinneri,* a fine variety, with two flowers to a scape, the sepals rose, the petals well recurved, bright rose, and the lip indistinctly spotted with bright rosy crimson. *Cattleya citrina,* a very large variety, the petals two and a half inches long and one and a half inch broad, canary yellow, beautifully scented, the lip bright gamboge. *Odontoglossum Alexandræ,* a grand variety, three and three-quarter inches across, the sepals rose coloured, both sepals and petals marked in the centre with distinct reddish-brown blotches, *i.e.*, one blotch to each, five in all; petals almost white, lip profusely marked with small irregular spots. This is one of the most distinct varieties we have seen.—B. S. W.

High-priced Cattleyas.—At a recent sale at Stevens's Auction Rooms, on the occasion of the distribution of the late Mr. R. B. Dodgson's Orchids, enormous prices were realised for some of the established plants. *Cattleya Trianæ Osmanii,* a variety named some years ago by ourselves, realised the sum of 215 guineas, and was purchased for our own collection. *Cattleya Trianæ Dodgsonii* realised 185 guineas, and was purchased by W. Lee, Esq., Downside, Leatherhead. We hope on some future occasion to figure both these gems.—B. S. W.

Cattleya Skinneri oculata.—During a recent visit to the Collection of Orchids belonging to G. Hardy, Esq., Pickering Lodge, Timperley, we noticed a grand specimen of this splendid variety. There were seven spikes on the plant, some carrying as many as ten flowers; the colour was an intense mauve-magenta. Mr. Hardy grows this Cattleya extremely well. We also noticed a grand lot of Cattleyas coming on, especially *C. Warnerii* and *C. Mossiæ,* together with some fine examples of *Lælia purpurata,* showing well for flower.—H. W.

CYPRIPEDIUM MEIRAX.

CYPRIPEDIUM MEIRAX.

[Plate 95.]

Garden hybrid.

Epiphytal. Acaulescent. *Leaves* distichous, coriaceous, oblong-lanceolate, acute, the upper surface of a dull dark green, faintly mottled with transverse markings, the underside of a dull wine purple. *Scape* (peduncle) densely hairy, dark purple, with a short boat-shaped purplish-green bract at the base of the six-ribbed ovary. *Flowers* medium-sized, solitary on the peduncle; *sepals* hairy externally, glabrous and glossy within; the dorsal one broad ovate, about an inch in breadth, ciliate at the base, and fringed at the edge with whitish hairs, blush-white, with a stout central dark purple stripe, having on each side a short green one, and beyond that five others graduated in length, and of a greenish-purple colour, the central rib more prominently hairy at the back and tip; lower connate sepal oblong-ovate obtuse, whitish, with seven green ribs or veins; *petals* linear-oblong, broadest upwards, two inches long and about half an inch broad, plane at the base, recurvo-undulate at the tip, the upper side (half) glossy, of a deep claret-purple, streaked with green at the base, somewhat ribbed, ciliate with purple hairs, the central rib stouter, purple, with a few round black spots distributed along its base, the lower half of the same colour but less glossy; *lip* rather large, oblong, an inch and three-quarters long, polished, the sides purple, deeply inflexed and extended at the base like a pair of ears, the front part green and veiny towards the tip, with a short purple rib, deep purple towards the edge; the inside of the pouch yellowish-tawny, beautifully spotted with crimson. *Staminode* large, roundish, deeply notched in front, dull purplish-tawny, with green veiny markings in the centre, shining as if varnished, thickly studded with short stiff hairs.

Cypripedium Meirax, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s. xiv., 524.

This is one of the many hybrids that have been raised in this country, and which we owe to the handiwork of cultivators. It must be highly gratifying to those who devote their time and skill to so interesting a pursuit as the origination of new varieties, to witness the success of their labours, and we are greatly indebted to those amateurs and nurserymen who have so successfully carried out this process of hybridisation. Some of the new forms produced may be disappointing, but others are in every way encouraging, by yielding fresh forms and colours, and in this way, through careful selection, many beautiful flowers are originated. In their native country the wild plants are no doubt crossed by insects, but in such cases there are, perhaps, comparatively few forms growing sufficiently near together, and even those not all flowering at one time. The artificial hybridiser has the advantage of more abundant material to operate upon, and he can seize the most favourable

opportunities for crossing various forms and colours from different localities; while by growing them together, and getting them into flower at the same time, the operation can be performed with a greater prospect of securing good results. We, therefore, hope that this useful and interesting work will be carried on with spirit by our amateur orchidophilists.

There is no class of Orchids more useful than that which forms the subject of our plate. The flowers of the Cypripediums in most cases will last a long time, and the plants are, moreover, of easy cultivation, requiring but little room, and most of them possessing perennial beauty in their nicely variegated foliage. The hybrid we now figure was raised by R. Warner, Esq., Broomfield, Chelmsford, from whom we have procured the stock. It was raised in company with several others, which have proved to be most beautiful and free-blooming subjects, but of which the parentage has not been noted.

Cypripedium Meirax was named by Professor Reichenbach. It is a small-growing form, as will be seen by our plate, but it produces good showy flowers, the dorsal sepal being broad, white, with green and purple veins, the petals purplish-crimson with green nerves, and the lip veined and barred with purple. It blossoms during the winter and spring months, according as it completes its growth, and the flowers last six weeks or more in perfection.

The plants require the same treatment as those of the *C. barbatum* section. The most suitable material for growing them in is rough fibrous peat, having a small quantity of charcoal interspersed; they must have good drainage, as they need a good supply of water during the growing season, which follows the blooming period, and while they are making their growths they require more water. They will thrive either in the Cattleya house or the cool end of the East India house, near the light; but they must be shaded from the hot sun in summer. A little sun heat, however, will not injure them.

The Cypripediums of this character are propagated by dividing the plants when they begin to grow, leaving one or two old growths at the back. The divided parts should be potted in small pots until they are rooted, and then, should they require it, larger ones may be given to them.

Insects should be kept under. Sometimes the red thrips will attack the young leaves; this should be well sought after, for if it gets ahead the leaves will soon turn brown, and get very much disfigured, the plant, moreover, getting injured. A little tobacco powder applied to the leaves is a good remedy. When the insects are found to be destroyed it can easily be washed off.

J.Nugent Fitch del.et lith.

ONCIDIUM PHALÆNOPSIS.

J.Nugent Fitch imp.

ONCIDIUM PHALÆNOPSIS.

[Plate 96.]

Native of Ecuador.

Epiphytal. *Pseudobulbs* oblong, furrowed, about two inches long, of a dark green colour, with abortive leaves at their base. *Leaves* ligulate, broadest upwards, acute, somewhat narrowed and channelled towards the base, six to eight inches long or more, pale green. *Racemes* from the axils of the abortive leaves at the base of the bulbs, the flowers seated on longish pedicels having small appressed bracts at their base. *Flowers* narrow-oblong in outline, an inch and a half or more in length, and a little over an inch broad, the lip comparatively large and conspicuous; *sepals* three, the dorsal one oblong, acute, venosely marbled with purple, and having a white margin, the lateral ones of the same colours, concealed by the lip, oblong-lanceolate, united in the lower half and directed downwards; *petals* spreading, oblong-obovate apiculate, white, with two or three broad transverse blotches of deep rich purple, the apex white; *lip* pandurate, an inch long by an inch and a half broad, three-lobed, the lateral lobes broad, rounded, white, flushed with purple and spotted with dark purple-crimson, the middle lobe dilated, deeply bilobed, spotted at the narrow basal part, but almost wholly white in the broader front part, the disk, with a prominent yellow crest, having two projections at the base, and two acute lateral arms in front, with an elevated angular keel between. *Column* short, with the sides of the lower edges rounded, green at the tips, the apex and margins of the stigmatic hollow purple.

Oncidium Phalænopsis, *Linden and Reichenbach fil.*, in *Gardeners' Chronicle*, 1869, 416; *E. André, L'Illustration Horticole*, 3 ser., t. 3.

The Oncids form a large genus of Orchids, some of which are large-growing plants with showy flowers. They form a most useful group, and many of them are of easy cultivation, especially the large-growing kinds, which we find in the older collections of Orchids, these being cultivated for their long spikes of golden blossoms, which are useful for cutting purposes, and where large vases of flowers have to be supplied the graceful effect produced by their light airy panicles and their bright colours is very charming.

The species we have now to bring under notice is of the small-growing section, and requires more care and attention than some others, being one of those kinds which are more difficult to cultivate. This section contains many beautiful plants. Our specimen was received from the well-grown collection of E. Salt, Esq., Ferniehurst, Shipley, near Leeds, who has been successful in growing this rare species, which is not often met with.

Oncidium Phalænopsis is a compact evergreen plant, with small pseudobulbs and light green leaves about eight inches in length. The flower spike proceeds from the base of the pseudobulbs, and bears six or more blossoms. The sepals and petals are creamy white, barred and spotted with purple; the lip is large, white, spotted at the base with violet-crimson, and the crest is golden-yellow. These flowers last a long time in beauty.

The plant requires great care in cultivation, like many others of its class, but it is worth all the care bestowed upon it. We have found it grow well in small pots or pans with a little rough fibrous peat and some lumps of charcoal, so that it may send its roots over the peat and charcoal. The small-growing Orchids of this character do not like their roots covered up, and when they are making new roots it is very important that the insects should not be allowed to feed upon them, as the plants require all their roots to be sound and good to keep them in a healthy condition. They should be placed as much in the light as possible, so that their growths may be strong and full of vigour. The plants naturally grow on trees, in which position they get a great deal of moisture during the rainy season, while in the dry season they get heavy dews, and are shaded a little from the burning sun although they get all the light possible. In our artificial treatment of these plants we should give them their natural conditions as nearly as possible, for by so doing we shall not go far away from the right course. We have found the cool end of the Cattleya house to suit most of these small-growing kinds.

We trust we may soon see a good importation of this rare *Oncidium*, so that growers may have a chance to try their skill upon its cultivation. The plants we have received at various times have been but small and puny. If only growers could get over some strong vigorous clumps, they would have a chance of making them into good specimens—an object which is worth the effort, as the species is one of the most beautiful and distinct of the family.